Ongoing Monitoring Report, October 2023 – July 2024

Department of Defence

Per and Polyfluoroalkyl Substance (PFAS) Ongoing Monitoring Program (OMP) – Royal Australian Air Force (RAAF) Base Amberley

JBS&G 66133 | 161051

13 March 2025

JBS&G

We acknowledge the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We pay respect to Elders past and present and in the spirit of reconciliation, we commit to working together for our shared future.



Caring for Country The Journey of JBS&G.
Artist: Patrick Caruso, Eastern Arrernte

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Abbreviations

Abbreviation / Acronym	Full Term
AFFF	Aqueous Film Forming Foam
AMO	Atlantic Multidecadal Oscillation
AHD	Australian Height Datum
AIR	Annual Interpretive Report
ANZECC	Australia New Zealand Environmental Conservation Council
ASC NEPM	Assessment Of Site Contamination National Environment Protection Measure 1999 (As Amended 2013)
BoM	Bureau Of Meteorology
CPSA	Confirmed Primary Source Area
CSM	Conceptual Site Model
Defence	Department Of Defence
DO	Dissolved Oxygen
DOC	Dissolved Organic Carbon
DoH	Department Of Health
DP	Discharge Point
DQOs	Data Quality Objectives
DSI	Detailed Site Investigation
EC	Electrical Conductivity
Eh	Oxidation Reduction Potential
ERA	Ecological Risk Assessment
FTA	Fire Training Area
HEPA	Heads Of Environmental Protection Agencies
HHRA	Human Health Risk Assessment
LOR	Limit Of Reporting
NA	Not Applicable
NEMP	National Environmental Management Plan
NHMRC	National Health and Medical Research Council
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
PFAS	Per- And Poly-Fluoroalkyl Substances
PMAP	PFAS Management Area Plan
QA/QC	Quality Assurance / Quality Control
RAAF	Royal Australian Air Force
RAP	Remediation Action Plan
SAQP	Sampling Analysis and Quality Plan
STP	Sewage Treatment Plant
TOC	Total Organic Carbon
TSS	Total Suspended Solids
UST	Underground Storage Tank

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Per and Polyfluoroalkyl Substance (PFAS) Compounds and Chemical Abstract Service (CAS) Numbers

PFAS Group	Compound	CAS No.
Perfluoroalkyl Sulfonic Acids	Perfluorobutane sulfonic acid (PFBS)	375-73-5
	Perfluoropentane sulfonic acid (PFPeS)	2706-91-4
	Perfluorohexane sulfonate (PFHxS)	355-46-4
	Perfluoroheptane sulfonic acid (PFHpS)	375-92-8
	Perfluorooctane sulfonate (PFOS)	1763-23-1
	Perfluorodecane sulfonic acid (PFDS)	335-77-3
Perfluoroalkyl Carboxylic Acids	Perfluorobutanoic acid (PFBA)	375-22-4
	Perfluoropentanoic acid (PFPeA)	2706-90-3
	Perfluorohexanoic acid (PFHxA)	307-24-4
	Perfluoroheptanoic acid (PFHpA)	375-85-9
	Perfluorooctanoic acid (PFOA)	335-67-1
	Perfluorononanoic acid (PFNA)	375-95-1
	Perfluorodecanoic acid (PFDA)	335-76-2
	Perfluoroundecanoic acid (PFUnDA)	2058-94-8
	Perfluorododecanoic acid (PFDoDA)	307-55-1
	Perfluorotridecanoic acid (PFTrDA)	72629-94-8
	Perfluorotetradecanoic acid (PFTeDA)	376-06-7
Perfluoroalkyl Sulfonamides	Perfluorooctane sulphonamide (FOSA)	754-91-6
	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8
	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2
	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	2448-09-7
	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2
	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9
	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6
(n:2) Fluorotelomer Sulfonic Acids	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4
	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0

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Units

Abbreviation	Term	Abbreviation	Term
GWE	Groundwater Elevation	°C	Degrees Celsius
Kg	Kilogram	m AHD	Metres Australian Height Datum
km	Kilometre	m bTOC	Metres below Top of Casing
km2	Kilometre squared	mg	Milligram
mV	Millivolt	mg/L	Milligram per litre
L	Litres	mbgl	Metres below ground level
m	Metre	µS/cm	Micro-Siemens per centimetre
mm	Millimetre	SWL	Standing Water Level
cm	Centimetre	µg	Microgram
Ha	Hectare	µg/L	Microgram per litre

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Executive Summary

Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) (Defence, 2020) at the Royal Australian Airforce (RAAF) Base Amberley (the 'Base') and the associated Management Area. The location of the Base and Management Area have been illustrated on **Figure 1.**

This Ongoing Monitoring Report (OMR) has been prepared in accordance with the Defence (2024) Ongoing Monitoring Program Reporting Guidance and presents an assessment of monitoring completed in accordance with the OMP between October 2023 and July 2024 (the 'monitoring period'). This OMR has considered the findings of the most recent OMR, as documented in AECOM (2024a) Ongoing Monitoring Report (March 2021 to May 2023) PFAS OMP – RAAF Base Amberley.

Objective

The objective of this OMR is to assess the following in consideration of the PFAS Management Area Plan (PMAP) (Defence, 2020), historical OMP data and other relevant information:

- Objective 1: The distribution (spatial and temporal) and transport of PFAS in the Management Area;
- Objective 2: Whether the current understanding of risks to human and ecological receptors require review;
- Objective 3: PMAP delivery and associated management actions, where relevant.

Mass Flux Study

A mass flux study was prepared by Senversa in 2023 (Senversa, 2023). A mass flux study is a technical investigation which identifies how PFAS is migrating across an area and is critical for informing PFAS management approaches. The mass flux study assessed the site as 11 different surface water catchment areas which discharge to Warrill Creek or Bremer River. The mass flux study identified that:

- 99% of the PFAS mass flux from the base is via surface water, with the remaining 1% via groundwater;
- Of the PFAS mass flux via surface water:
    - 56 % originates from Catchment 3 (inclusive of Confirmed Primary Source Area (CPSA) N);
    - 24 % originates from Catchment 8 (inclusive of CPSA A and CPSA V); and
    - 6.6 % originates from Catchment 7 (inclusive of CPSA D).

The findings of the mass flux study were incorporated into the interpretation of data collected over the monitoring period.

Monitoring Scope

AECOM Australia Pty Ltd (AECOM) completed biannual monitoring of groundwater, surface water and sediment between October 2023 and May 2024 in accordance with the most recent version of the sampling, analysis and quality plan (SAQP) applicable at the time the sampling was completed. The monitoring program consists of biannual monitoring events at the end of the dry season (October/November 2023) and at the end of the wet season (April/May 2024). Sampling under these different climatic conditions provides an understanding of the movement and concentrations of PFAS in the environment. An additional targeted round of groundwater monitoring was completed in July 2024 following well replacement works to address recommendations from the March 2021 to May 2023 OMR.

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Interpretive Assessment

Surface Water and Sediment

Surface water and sediment samples were collected from on-Base drainage lines as well as Warrill Creek and the Bremer River. All on-Base drainage lines discharge into either Warill Creek or the Bremer River. Warrill Creek converges with Bremer River immediately east of the Base, with Bremer River then continuing east and then north throughout the Management Area.

For sediment, 48 samples were collected during the October / November 2023 event and 48 samples were collected during the April / May 2024 event. For surface water, 46 samples were collected during the October / November 2023 event and 45 samples were collected during the April / May 2024 event.

PFAS concentrations detected in surface water samples were predominantly consistent with historical results, with a) no evidence of increasing trends and b) new historical maximum concentrations detected at less than 10% of the sampling locations.

PFAS concentrations detected in sediment were predominantly consistent with historical results, with new historical maximum concentrations detected at less than 10% of the sampling locations.

Groundwater

A groundwater aquifer is an underground layer of porous and permeable rock, gravel, sand or silt, which can contain or transmit groundwater. There are two groundwater aquifers that are monitored at Amberley: Alluvium-Tertiary Formation and Wallon Coal Measures. The Walloon Coal Measures aquifer is present at surface along the western boundary of the Base and underlies the Alluvium-Tertiary Formation aquifer at other locations.

The groundwater flow direction in the shallow aquifer during the sampling events was similar. Groundwater flows in multiple directions from the central western portion of the Base, towards Bremer River and Warrill Creek flowing northeast, east and southeast. Groundwater flowing outwards in multiple directions from a single area where there is elevated groundwater is referred to as radial.

The groundwater flow direction in the deeper aquifer during the sampling events were also similar, with groundwater flowing from west to east. This is consistent with previous investigations and monitoring rounds.

Groundwater samples were collected from monitoring wells installed across the Base and areas within the Management Area adjacent to Warrill Creek and the Bremer River. 39 groundwater samples were collected during October / November 2023 event and 42 samples were collected during the April / May / July 2024 event.

PFAS concentrations detected in groundwater were consistent with historical results, noting a) evidence of both increasing and decreasing concentration trends in some wells, and b) identification of new historical maximum concentrations in less than 10% of the monitoring wells. The increasing trends are considered to be related to above average rainfall conditions and elevated groundwater levels, as noted in the previous OMR.

Risk Summary

The conceptual site model was reviewed considering the new monitoring data collected over the monitoring period. No changes were identified to sources, pathways or receptors at the Base or within the Management Area to change the risk profile described in the PMAP.

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Conclusions

The overall conclusions can be summarised as follows:

- Objective 1: The distribution of PFAS in the Management Area has not changed significantly since the previous monitoring period;
- Objective 2: The risk profile to human health receptors within the Management Area remains unchanged since the publication of the PMAP;
- Objective 3: Key management actions undertaken during the monitoring period have included a) operation of two water treatment plants which collected and treat water from fire training areas, and b) commencing construction of a new Sewage Treatment Plant with PFAS treatment capability.

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1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) (Defence, 2020) at the Royal Australian Airforce (RAAF) Base Amberley (the 'Base') and the associated Management Area. The location of the Base and Management Area have been illustrated on **Figure 1.**

This Ongoing Monitoring Report (OMR) has been prepared in general accordance with the Defence (2024) *Ongoing Monitoring Program Reporting Guidance* and presents an assessment of monitoring completed in accordance with the OMP between October 2023 and July 2024 (the 'monitoring period').

1.2 Objective

The objective of this OMR is to assess the following in consideration of the PFAS Management Area Plan (PMAP) (Defence, 2020), historical OMP data and other relevant information:

- Objective 1: The distribution (spatial and temporal) and transport of PFAS in the Management Area;
- Objective 2: Whether the current understanding of risks to human and ecological receptors require review;
- Objective 3: PMAP delivery and associated management actions, where relevant.

1.3 Scope

The following scope of works were completed to satisfy the objective of this OMR:

- **Section 2**: Summary of Base setting inclusive of Base location, Management Area and environmental setting;
- **Section 3:** Summary of sampling and analysis completed over the monitoring period;
- **Section 4**: A review of the reliability of data collected over the monitoring period;
- **Section 5**: Summary of adopted PFAS screening criteria;
- **Section 6**: Summary of key events since preparation of the last OMR;
- **Section 7**: Factual summary of Ongoing Monitoring Program data collected from the October 2023 monitoring event, April 2024 monitoring event and available Ongoing Monitoring Program data collected since 2020;
- **Section 0**: Interpretive analysis of the current and historical Ongoing Monitoring Program data;
- **Section 9**: Review of the Conceptual Site Model (CSM);
- **Section 10**: Review of the risk profile; and
- **Section 11**: Provision of conclusions and recommendations.

2. Base Setting

2.1 General

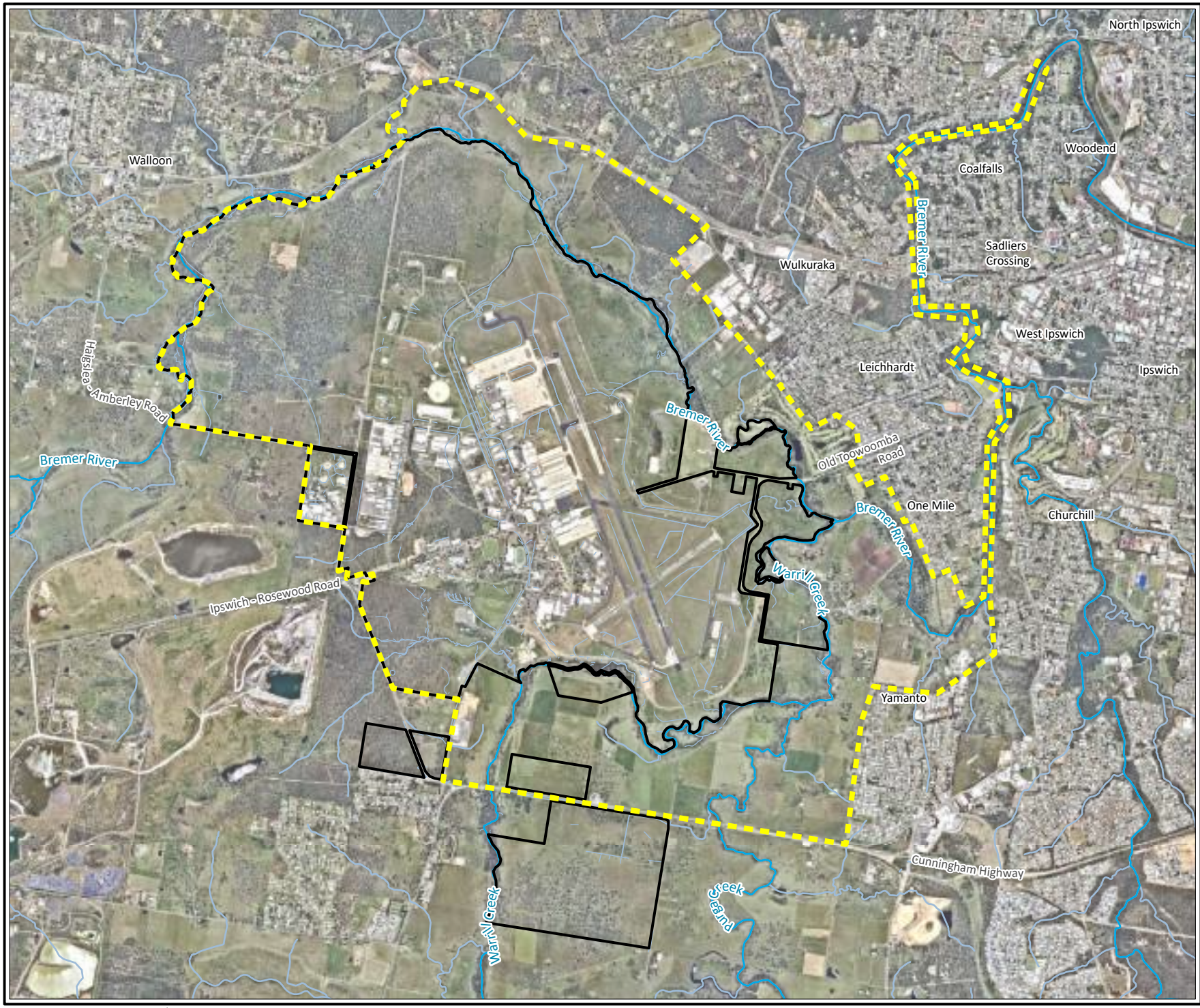
The following sections present a summary of the Base setting based upon historical investigation reports (as cited in the PMAP) and publicly available information. Consideration has also been given to information provided by the local community, including during a community engagement session on 6 August 2024.

2.2 RAAF Base Amberley

The Base is located at Southern Amberley Road, Amberley, Queensland approximately 7 kilometres (km) west of Ipswich and 50 km southwest of Brisbane (see **Figure 1** and **Figure 2**). The facility is approximately 2,030 hectares (ha) in area and includes the Base itself as well as several parcels of Defence owned land to the east and south of the Base. The Base details are listed in **Table 2-1**.

Table 2-1: Base Identification

Aspect	Detail
Address	Southern Amberley Road, Amberley, Queensland
Coordinates	Northern boundary: 273608.92 S, 1524139.18 E Southern boundary: 273917.50 S, 1524257.17 E Eastern boundary: 273809.06 S, 1424353.04 E Western boundary: 273806.10 S, 1524049.85 E South western point: 273905.38 S, 1524125.91 E North western point: 273737.99 S, 1524007.07 E North eastern point: 273659.71 S, 1524250.53 E South eastern point: 273836.01 S, 1524351.63 E
Base ID	0861
Property Owner	Department of Defence
Lot and Plan	The Base consists of 716 property Lots
Current Property Use	Military Aircraft Base
Size	~2,030 ha, with ~1,600 ha currently being vacant green space. It is noted that although there are currently no leases for grazing/agricultural within Base property, there remains a future potential for these land uses to occur within the reserved green space on Base.
Local Government Area	Ipswich City Council



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Approximate RAAF Base Amberley Boundary

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Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 2,500 5,000

metres

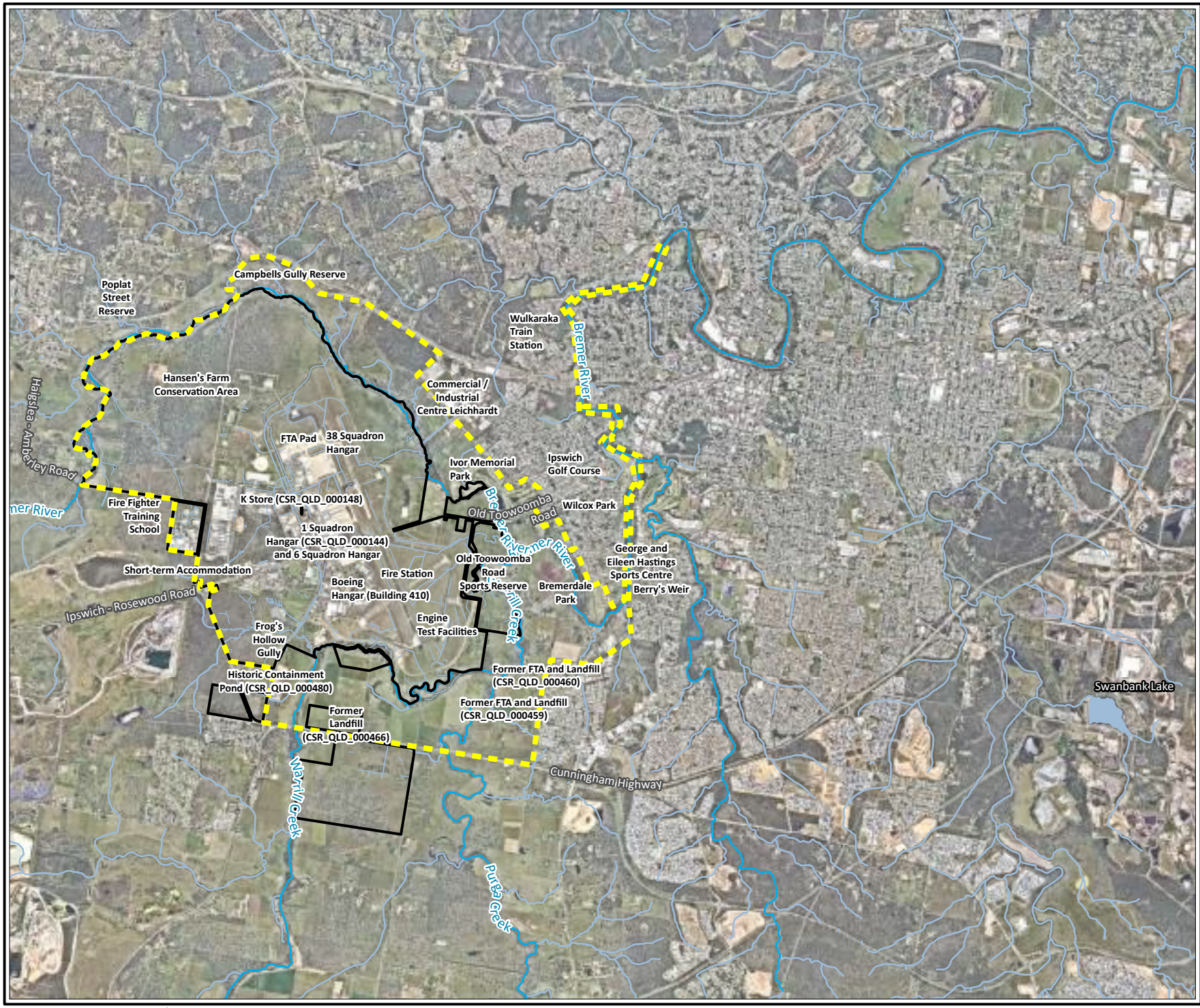
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SITE LOCATION

FIGURE 1

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_01_SiteLoc
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Approximate RAAF Base Amberley Boundary

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Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:72,000

0 2,500 5,000

metres

Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SITE LAYOUT

FIGURE 2

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_02_SiteLayout
Reference: www.nearmap.com - Imagery Date: 03/06/2024

2.3 Land Use

2.3.1 Current and Previous Land Use

European settlement occurred around 1826, coinciding with the discovery of limestone in the area. Historical land use post-settlement included, an aboriginal mission and some areas of cotton farming and livestock rearing. The property was purchased by the Commonwealth between 1865 and 1938 and was developed as an airfield in 1940.

The current Base is an operational air force facility and operates two runways. The main runway runs approximately north to south, parallel to the eastern boundary. The second runway is shorter and runs southwest to northeast and is in the southern part of the Base. Parallel to the main runway is a taxiway that services both runways and provides access to the main hangars. Most of the operational areas, historical and current, are located to the west of the runways and taxiways. Operational areas where PFAS containing firefighting foams, including Aqueous Film Forming Foam (AFFF), has historically been used (see **Figure 5**) include:

- The main hangars for 1 Squadron, 6 Squadron and 38 Squadron which house fire suppression systems;
- The redeveloped fire training area pad and AFFF holding tank;
- The fire-fighter training school;
- Fuel facilities;
- Engine test facilities;
- Temporary stockpile facility for PFAS impacted soils.

Defence is no longer using AFFF and is in the process of phasing out PFAS containing firefighting foams at the Base. At the time of this report, PFAS containing firefighting foams have been phased out in mobile firefighting equipment and training areas, with PFAS containing firefighting foams to be phased out in fixed hangar systems in the near future.

2.3.2 Surrounding Land Use

Land to the north, south and west of the Base is surrounded largely by rural residential areas and several urban suburbs. Warrill Creek and Bremer River form part of the boundary of the Base to the south and north, respectively with Purga Creek to the southeast of the Base. The surrounding land is used for grazing, cropping, mining and small acreages/hobby farms. East of the Base, land use changes from rural to industrial and residential approaching the City of Ipswich. Residential development and parkland areas are present adjacent to the Bremer River, downstream of the Base. Kayaking, canoeing, fishing and swimming are popular recreational activities in the waterways east of the Base.

It is understood that Berry's Lagoon (also known as Berry's Weir or the Bremer River fishway), located immediately north of the Churchill's Abattoir in Yamanto, is a popular local recreational area. Berry's Lagoon is approximately 2.2km downstream of the confluence of Bremer River and Warrill Creek.

2.4 Base Environmental Setting

Key Base environmental setting details are summarised in **Table 2-2** below and illustrated on **Figure 3, Figure 4,** and **Figure 6.**

Table 2-2: Environmental Setting Details

Setting	Description
Regional Climate	The climate in the Amberley area is warm and temperate with annual average day-time temperatures ranging from 21°C in July to 31°C in January. There is a wet season from December through to March, with the months from April to November being relatively dry.
Topography	The Base is mostly located in the floodplains of the Bremer River, and Purga and Warrill Creeks. The runways, taxiways and hangars are located below the 30 m Australian Height Datum (metres AHD) contour line, within the flood plains, where the topography is very flat (with surface gradients of 0.003 to 0.005), in the eastern portion of the Base. In the central west of the Base, the topography rises above the floodplain to topographical highs of 50 m AHD in the south (south of Frog's Hollow Gully) and 60 m AHD in the west, at the Fire Fighting Training School. Most of the other operational areas and accommodation are located in the central western area, above the floodplains.
Geology	The following geological units are present at the Base: • Quaternary Floodplain Alluvium, comprising silt, gravel, and clay in the eastern and lower elevation portions of the Base. • Tertiary Formation consisting of claystone, siltstone, sandstone, and basalt in the west-central at higher elevation portions of the Base and basalt, in the northwestern-central and southwestern-central portions of the Base. • Jurassic Walloon Coal Measures comprising shale, siltstone, sandstone, and coal seams, cropping out along the western Base boundary. • Quaternary (Holocene) Terrace Alluvium, lowest river terrace comprising gravel, sand, silt and clay along Bremer River and Warrill Creek at the northern, southern, and eastern boundaries, respectively. The regional area has been subject to mining activity including the Jeebropilly coal mine located to the south-west of the base. The Ipswich Planning Scheme Overlay - OV3 Mining Influence Areas (City of Ipswich, 2017) maps a portion of Confirmed Primary Source Area (CPSA A) and the Hansen Farm Conservation Area as being underlain by mining influence areas, understood to be mine void and associated buffer zone. The Detailed Site Investigation (DSI) (CH2M Hill, 2018) reported the underground mine working were expected to be flooded where located beneath the water table.
Acid Sulfate Soil	A review of the Atlas of Australian Acid Sulphate Soils[1], indicates that the riparian zones of the Bremer River and Warrill Creek adjacent to the base are a mapped as having a 'extremely low probability of occurrence (1-5%)'.
Hydrogeology	**Aquifer units -** The three main water-bearing units underlying the Base include the Quaternary Floodplain Alluvium, Tertiary Formation, and the Walloon Coal Measures. The Alluvium and Tertiary Formation are connected and are considered a single hydrogeological unit. The DSI (CH2M Hill, 2018) identified that there was hydraulic connection between the Alluvium-Tertiary Formation and underlying Walloon Coal Measures. The geological data indicated vertical and horizontal flow in the Walloon Coal Measures may be restricted by lower hydraulic conductivity zones between coal seams, which may mean flow in the Walloon Coal Measures is not continuous across the Base. **Depths to groundwater -** Groundwater at the Base has been encountered at depths between 5.5 to 35 metres below top of casing.

[1] Fitzpatrick, Rob; Powell, Bernie; & Marvanek, Steve (2011): Atlas of Australian Acid Sulphate Soils. v2. CSIRO. Data Collection. https://doi.org/10.4225/08/512E79A0BC589

Setting	Description
	An ephemeral water body, Frog's Hollow Gully, is present in the southwest portion of the Base and connects with Warrill Creek at the Base boundary. Based on the climatic conditions and groundwater recharge there is a rise of the groundwater table during the wet season. This increase in water table elevation has the potential to increase contaminant migration towards the surface water bodies during the wetter months. **Groundwater Flow Direction** - Groundwater flow in both the Quaternary-Tertiary Formation and the Walloon Coal Measures is predominantly from the higher elevation central-west areas of the Base north and east towards Bremer River and southeast towards Warrill Creek. Groundwater flow in off-Base areas adjacent to the Base is anticipated to follow the alignments of Bremer River and Warrill Creek.
Hydrology	The Base and Management Area are located within the Bremer River sub-catchment. The Bremer River sub-catchment covers approximately 2,036 square kilometres (km^2) and is a major sub-catchment of the Brisbane River catchment. The main watercourses in the Bremer River sub-catchment include the Bremer River, Purga Creek and Warrill Creek. The Base has historically been segregated into 11 surface water catchment areas which discharge to Bremer River or Warrill Creek at a number of discharge points. This is discussed in more detail in **Section 6.1**. Purga and Warrill Creeks run in a south-to-north direction and follow the southern boundary of the Base before joining the Bremer River to the east of the Base. Warrill Creek originates 50 km southwest of the Base, with a catchment area of 920 km^2. Flow into Warrill Creek is partly controlled by the Moogerah Dam on Reynolds Creek, a tributary of Warrill Creek. The Bremer River flows from west-to-east and borders the northwest, northern and eastern extents of the Base. The Bremer River enters the Brisbane River 8 km downstream and to the northeast of the Base. Based on groundwater and surface water elevations within and adjacent to the Bremer River and Warrill Creek, the DSI (CH2M Hill, 2018) identified that these watercourses were potentially both gaining and losing streams depending on the watercourse reach and season. Landowners who adjoin waterways have 'riparian rights' under the Water Act, that permit the owner of land adjoining a watercourse to take from that stream for stock watering or domestic purposes without a licence. The Water Use Survey (WuS) completed in 2017 identified properties that have access to water from the Bremer River, Warrill Creek or Purga Creek. The HHRA (EnRisks 2019) identified a potentially elevated risk to human health from consumption of home-grown beef and offal where cattle have access to PFAS impacted waterways, including Warrill Creek. Three extraction licences exist downstream of the Base (one in Warrill Creek and two in the Bremer River) for the purposes of agriculture and irrigation (watering of crops used for domestically sold livestock). Due to the salinity concentrations ranging from 500 – 5,000 mg/L and data from a WuS completed in 2017 is considered unlikely that surface waters were used for potable purposes. It was identified that water from the Bremer River is also used for industrial water supplies.
Hydrogeology to Hydrology Relationship	The relationship between groundwater and surface water systems is critical to understand when interpreting analytical data and attempting to understand contamination patterns and trends. The relationships between groundwater and surface water are typically thought of in terms of losing streams (i.e. surface water discharges into groundwater) and gaining streams (i.e. groundwater discharges into surface water). Surface water bodies can be losing, gaining or both losing/gaining. Surface water bodies which are both losing and gaining relate to spatial changes (e.g. geology changes over the length of a stream) and temporal changes (e.g. rainfall driven lowering or raising of the groundwater table).

Setting	Description
	Historical reports have referred to: • Bremer River as being both a losing and gaining stream. • Warrill Creek is a losing stream. At the time of this draft report, JBS&G is in the process of organising for survey of Warrill Creek and Bremer River to further assess the gaining/losing characteristics of these water ways.
Base Management Drainage	There is an extensive stormwater drainage system across the Base originally constructed in the 1940s with various upgrades over time. The drainage system comprises open, lined, and unlined drains, covered lined drains, underground drainpipes and grated lined drains to direct water from operational areas to discharge points off-Base. Discharge points for the drainage system to Bremer River and Warrill Creek and catchments are shown on **Figure 6.**

2.5 Management Area

The PFAS Management Area is divided into the following zones where potential risks have been identified that require management:

- **The Base**: The Base is divided into 11 surface water catchment areas. The Base is currently an operating RAAF Base and is utilised for flying operations, bulk fuel storage, chemical and armaments storage, firefighting training, short-term accommodation, and support and maintenance activities. Some land is also used for residential and recreational / open space uses;
- **Land adjacent to the Base and Warrill Creek**: This area comprises land adjacent to the southern boundary of the Base and Warrill Creek downstream to the confluence with the Bremer River. This area includes private properties adjacent to the Base along this stretch of the creek. Private properties that lie within this area are used for agriculture and rural residential purposes. *Note: this area represents what has previously been referred to as Area 1 in the Detailed Site Investigation (DSI) (CH2M Hill, 2018), Human Health Risk Assessment (HHRA) (EnRisks, 2019) and ecological risk assessment (ERA) (EnRisks, 2020) documents;* and
- **Land adjacent to the Base and Bremer River:** This area comprises the Bremer River adjacent to the western, northern and eastern boundaries of the Base and extends as far downstream as Cribb Park[2]. This area includes private properties adjacent to the stretch of river adjacent to the Base as far downstream as Woodend Road Reserve. Private properties within this area are used for agriculture and rural residential purposes. Bremer River is also used for recreational purposes including swimming and fishing. *Note: this represents what has previously been referred to as Area 2 and 3 in the DSI (CH2M Hill, 2018), HHR) (EnRisks, 2019) and ERA (EnRisks, 2020) documents.*

The Management Area does not include the following zones:

- Bremer River and adjacent properties to the northwest of the Base (upstream of the section of Bremer River referred to above), as well as Purga Creek to the south of the Base. *Note: these represent what has previously referred to as Area 4 and 5 respectively in the DSI (CH2M Hill, 2018), HHRA (EnRisks, 2019) and ERA (EnRisks, 2020) documents. There were no potential elevated risks relevant to these areas identified as part of the HHRA or ERA;* and
- The Leichardt Residential Area. A HHRA was completed by CH2M Hill (2020) which concluded the potential risks within the area are low and acceptable.

[2] Approximately 9.25km downstream of the Bremer River and Warrill Creek confluence.

The Management Area boundaries are presented on **Figure 1.**

This report considers the Management Area as described above but focuses upon surface water catchment areas on the basis of significant investigation work conducted since the 2021-2023 OMR was prepared (see **Section 6.1**).

2.6 PFAS Source Areas

In the PMAP (Defence, 2020), a total of 29 PFAS source areas, referred to as confirmed primary source areas (CPSAs), were identified based on the findings of the DSI (CH2M Hill, 2018). The primary source areas are shown in **Figure 5** and summarised in the **Table 2-3** below.

Table 2-3: Summary of Primary Source Areas

CPSA Type	CPSA	Description
Major	CPSA A	Former Topside Aviation Fire Training Area (FTA) and current FTA Pad
	CPSA B	Hangar 410 (Building 410) and Former Landfill
	CPSA C	Frogs Hollow Former Fire Training School Location
	CPSA D	Sewage Treatment Plant (STP)
	CPSA G	Former FTA and Operations Testing Area
	CPSA J	Former FTA and Operations Testing Area
	CPSA M	Former Fuel Farm 1 and Triple Interceptor Pit
	CPSA N	Fire Station, FTA training
	CPSA U	38 Squadron Hangar
	CPSA V	AFFF Wastewater Holding Tank[1]
	CPSA W	Fire Fighting Training School
	CPSA X	Former Structural and Open Pit FTA
	CPSA Y	Former Secondary FTA
	CPSA DD	HS748 Former FTA on Disused Runway
Moderate	CPSA E	Historic Containment Pond
	CPSA CC	Former Landfill
	CPSA FF	Buried PFAS impacted stockpile from CPSA A
	CPSA S	AFFF Store / Truck Washdown at Fuel Farm 2/2A
Minor	CPSA BB	Areas used for irrigation – former grassed runways
	CPSA F	Potential former FTA and Landfill
	CPSA Q	1 Squadron Hangar and 6 Squadron Hangar
	CPSA Z	Fuel UST with AFFF listing
Insignificant	CPSA H	Potential Former FTA and Landfill
	CPSA I	Potential Former FTA and Landfill
	CPSA L	Potential Former Fire Training and Operations Testing Area
	CPSA O	Potential location of F1-11 2006 incident
	CPSA P	Potential location of 1978 Skyhawk incident
	CPSA R	K Store- potential AFFF storage
	CPSA T	Potential Location of Aircraft F-4E Incident
Secondary Impact Area	CPSA AA	Triple interceptor pits at engine test cell facilities 1 and 2, which receive wastewaters from a variety of on-Base facilities.
	CPSA EE	Former sports ovals – potentially irrigated with PFAS contaminated wastewater.

1. Reclassified from moderate to major following a recommendation in CH2M Hill (2020a)

2.7 Previous Ongoing Monitoring Report (OMR)

This OMR has considered the findings of the most recent OMR, as documented in AECOM (2024a) Ongoing Monitoring Report (March 2021 to May 2023) PFAS OMP – RAAF Base Amberley. The overall conclusions of this report are reproduced below:

> *"Following a review of the data collected during the monitoring period, some uncertainties have been identified regarding the lateral extent of PFAS in groundwater down-gradient of source areas and boundary locations. Although no changes have been identified to the understanding of risks associated with the nature and extent of PFAS in the RAAF Base Amberley Management Area, additional data would need to be collected to address the uncertainties and meet the objectives of the SAQP and OMP.*
>
> *Overall, the concentrations of PFAS across the different sample types and locations are consistent and of the same order of magnitude as historical data. Given the remaining PFAS concentrations at the on-Base source areas, it is recommended that the ongoing monitoring program of groundwater, surface water and sediment is continued to monitor the extent of PFAS, potential migration and any associated risk changes."*



Legend

- Watercourse
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- Approximate RAAF Base Amberley Boundary

Detailed Geological Structure

- Geological boundary approximate
- Geological boundary inferred
- Fault approximate
- Fault concealed
- Fault inferred
- Fault inferred/concealed
- Anticline approximate showing plunge
- Anticline concealed showing plunge
- Syncline approximate showing plunge
- Syncline concealed showing plunge

Detailed Surface Geology

- Aberdare Conglomerate (Rbwa)
- Blackstone Formation (Ribl)
- Gatton Sandstone (Jbmg)
- Koukandowie Formation (Jbmk)
- Qa-QLD (Qa)
- Qha/1-QLD (Qha/1)
- Qha/1-QLD,Qha/2-QLD (Qha/1,Qha/2)
- Qha/2-QLD (Qha/2)
- Qpa/1-SEQ (Qpa/1)
- Raceview Formation (Rbwc)
- Redbank Plains Formation (Tbr)
- Ripley Road Sandstone (RJbwr)
- Silkstone Formation/1 (Tbs/1)
- Silkstone Formation/2 (Tbs/2)
- Tivoli Formation (Rit)
- TQa-QLD (TQa)
- TQw-QLD (TQw)
- Ts/1-SEQ (Ts/1)
- Ts/3-SEQ (Ts/3)
- Tv/1-SEQ (Tv/1)
- Walloon Coal Measures (Jw)

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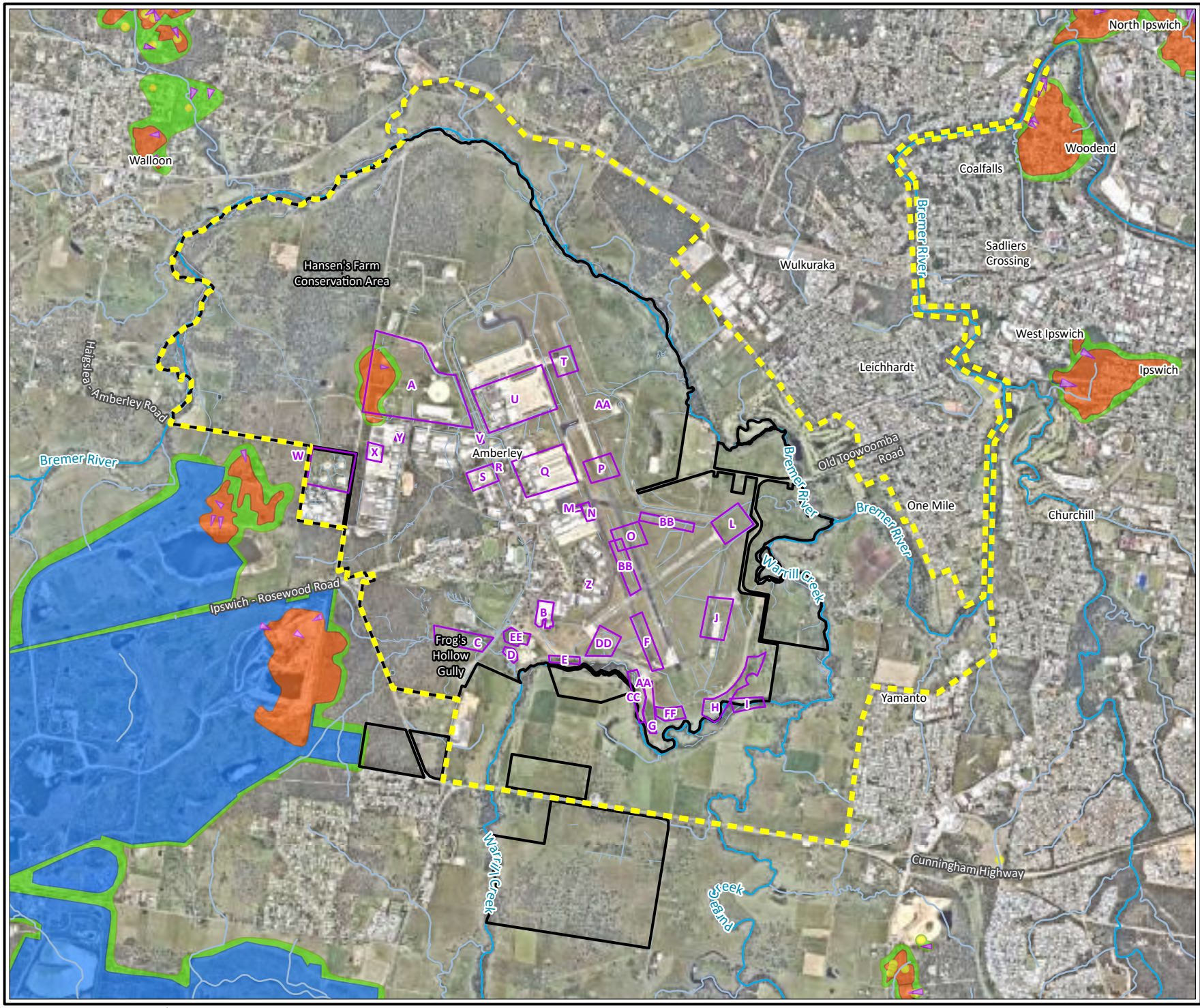
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RAAF Base Amberley, Queensland

SURFACE GEOLOGY

FIGURE 3

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_03_Geology



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- Approximate RAAF Base Amberley Boundary

Mining Activity

- Shaft
- Tunnel
- Area Affected by Underground Mining
- Surface Disturbance
- Mining Influence Constrained Area

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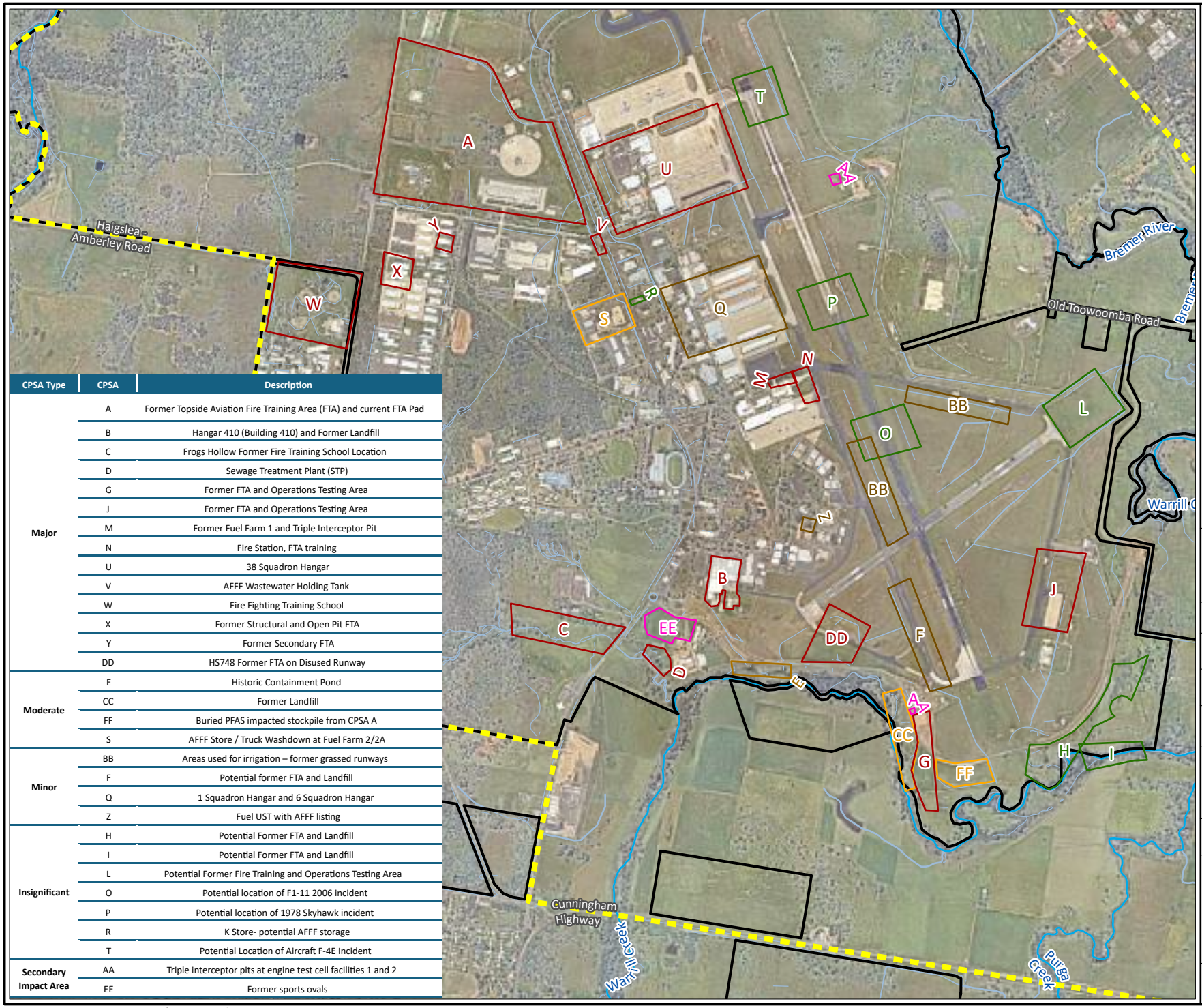
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RAAF Base Amberley, Queensland

MINING BUFFERS

FIGURE 4

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_04_Mining
Reference: www.nearmap.com - Imagery Date: 03/06/2024



CPSA Type	CPSA	Description
Major	A	Former Topside Aviation Fire Training Area (FTA) and current FTA Pad
	B	Hangar 410 (Building 410) and Former Landfill
	C	Frogs Hollow Former Fire Training School Location
	D	Sewage Treatment Plant (STP)
	G	Former FTA and Operations Testing Area
	J	Former FTA and Operations Testing Area
	M	Former Fuel Farm 1 and Triple Interceptor Pit
	N	Fire Station, FTA training
	U	38 Squadron Hangar
	V	AFFF Wastewater Holding Tank
	W	Fire Fighting Training School
	X	Former Structural and Open Pit FTA
	Y	Former Secondary FTA
	DD	HS748 Former FTA on Disused Runway
Moderate	E	Historic Containment Pond
	CC	Former Landfill
	FF	Buried PFAS impacted stockpile from CPSA A
	S	AFFF Store / Truck Washdown at Fuel Farm 2/2A
Minor	BB	Areas used for irrigation – former grassed runways
	F	Potential former FTA and Landfill
	Q	1 Squadron Hangar and 6 Squadron Hangar
	Z	Fuel UST with AFFF listing
Insignificant	H	Potential Former FTA and Landfill
	I	Potential Former FTA and Landfill
	L	Potential Former Fire Training and Operations Testing Area
	O	Potential location of F1-11 2006 incident
	P	Potential location of 1978 Skyhawk incident
	R	K Store- potential AFFF storage
	T	Potential Location of Aircraft F-4E Incident
Secondary Impact Area	AA	Triple interceptor pits at engine test cell facilities 1 and 2
	EE	Former sports ovals

Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Approximate RAAF Base Amberley Boundary

Confirmed Primary Source Area Type

- Major
- Moderate
- Minor
- Secondary Impact Area
- Insignificant

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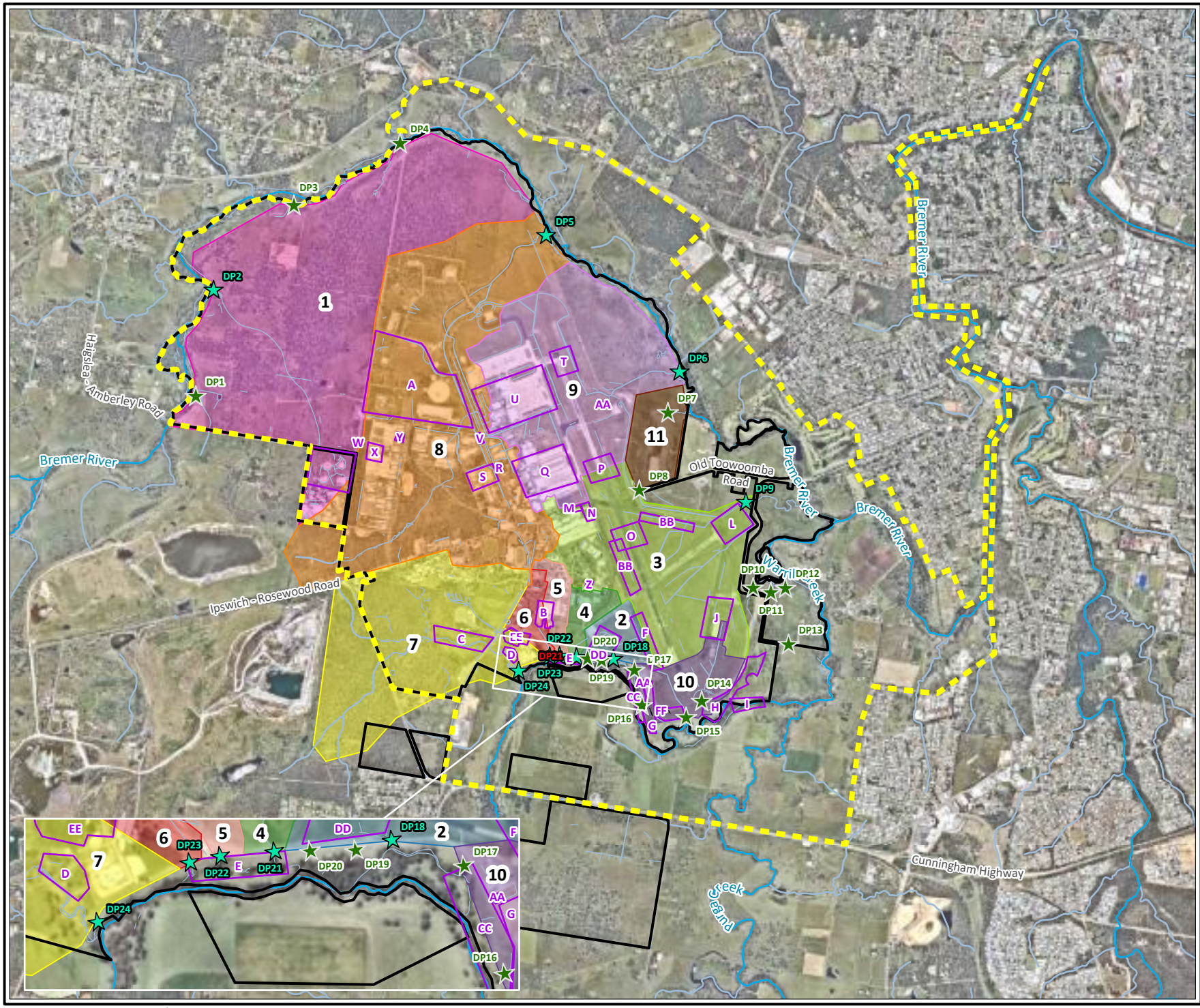
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RAAF Base Amberley, Queensland

CONFIRMED PRIMARY SOURCE AREAS

FIGURE 5

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_05_ConfirmedPrimarySourceAreas
Reference: www.nearmap.com - Imagery Date: 02/03/2024



Legend

- Major Discharge Point
- Minor Discharge Point
- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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RAAF Base Amberley, Queensland

SURFACE WATER CATCHMENTS

FIGURE 6

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_06_Catchments
Reference: www.nearmap.com - Imagery Date: 03/06/2024

3. Sampling and Analytical Methodology

3.1 Sampling and Analysis Quality Plan

The Sampling and Analysis Quality Plan (SAQP) (AECOM 2024b) presents the sampling and analytical approach for the acquisition of environmental monitoring data based on the seven step Data Quality Objectives (DQO) process outlined in the ASC NEPM. The SAQP has been provided as **Appendix B.**

Monitoring events were completed biannually over the monitoring period between May 2023 and July 2024, with:

- OMP monitoring events conducted during October 2023 and May 2024; and
- Well maintenance and targeted monitoring conducted during June-July 2024.

With respect to the 2nd bullet point noted above, a well installation and maintenance program was carried out on the existing groundwater monitoring network, as documented by AECOM (2024e), included as **Appendix C**. The program comprised the following scope of works:

- Decommissioning of five destroyed wells (MW008, MW009 MW015, MW018 and MW039) and installation of replacement monitoring wells (MW535, MW536, MW537, MW538 and MW539), which were screened in the same aquifer. Newly installed wells were developed following installation;
- Repair of well casing / standpipes / well covers (monument or gatic covers) of 14 wells (MW004, MW013, MW014, MW016, MW019, MW021, MW022, MW027, MW042, MW046, MW047, MW049, MW050, MW217);
- Unblocking one well which was reported to be obstructed (MW016);
- Surveying of top of casing for 15 wells where standpipes have been changed (MW002, MW004, MW014, MW016, MW019, MW021, MW022, MW042, MW046, MW217, MW535, MW536, MW537, MW538 and MW539); and
- Monitoring and analysis of the five replacement wells installed.

The results of the maintenance program have been incorporated into this OMR.

The monitoring events comprised collected of collection of groundwater, surface water and sediment samples across the Management Area in accordance with the SAQP. The following tables present a summary of the groundwater and co-located surface water/sediment monitoring network, including relevant contextual information to assist with discussion of monitoring results. Sample locations are shown on **Figure 7** and **Figure 8.**

Table 3-1: Groundwater Monitoring Network

Approximate Source Area Up-Gradient of Monitoring Well	Monitoring Well ID	Screened Aquifer
Major - CPSA A Former Topside Aviation FTA and current FTA Fire Pad	MW002	Walloon Coal Measures
	MW033	Walloon Coal Measures
	MW535	Alluvium
	MW536	Alluvium
	MW539	Alluvium

Approximate Source Area Up-Gradient of Monitoring Well	Monitoring Well ID	Screened Aquifer
Major - CPSA B Hangar 410 and Former Landfill	MW047	Tertiary Formation
Major - CPSA C Frogs Hollow Former Fire Training School Location	MW037	Alluvium
Major - CPSA D Sewage Treatment Plant	MW021	Alluvium
	MW032	Alluvium
Moderate - CPSA E Historical Containment Pond	MW048	Alluvium
Major - CPSA G Former FTA and Operational Testing Area	MW050	Alluvium
Major - CPSA J Former FTA and Operational Testing Area	MW005	Alluvium
Major - CPSA M Former Fuel Farm 1 and Triple Interceptor Pit and Major - CPSA N Fire Station	MW006	Alluvium
	MW023	Alluvium
	MW028	Alluvium
	MW029	Alluvium
	MW036	Alluvium
	MW309	Tertiary Formation
Insignificant - CPSA P Potential location of 1978 Skyhawk incident	MW538	Alluvium
Minor - CPSA V AFFF Wastewater Holding Tank	MW046	Tertiary Formation
Major - CPSA W Fire Fighting Training School	MW026	Tertiary Formation
	MW030	Walloon Coal Measures

Approximate Source Area Up-Gradient of Monitoring Well	Monitoring Well ID	Screened Aquifer
	MW031	Tertiary Formation
	MW042	Walloon Coal Measures
	MW043	Walloon Coal Measures
Major - CPSA X Former Structural and Open Pit FTA	MW041	Walloon Coal Measures
Major - CPSA Y Former Secondary FTA	MW537	Tertiary Formation
Minor - CPSA Z Fuel underground storage tank (UST) with AFFF listing	MW020	Tertiary Formation
Moderate - CPSA AA Triple Interceptor Pits at Engine Test Cell Facilities 1 and 2	MW007	Alluvium
Minor - CPSA BB Areas used for irrigation- former grassed runways	MW012	Tertiary Formation
Moderate - CPSACC Former Landfill	MW022	Alluvium
Major - CPSA DD HS748 Former FTA on Disused Runway	MW049	Alluvium
Off-Base Warrill Creek. These locations are down-gradient of multiple source areas.	MW054S	Alluvium
	MW054D	Walloon Coal Measures
	MW057S	Alluvium
	MW057I	Tertiary Formation
On-Base Bremer River. These locations are down-gradient of multiple source areas.	MW024	Alluvium
	MW025	Alluvium
	MW034	Alluvium
	MW035	Alluvium

Approximate Source Area Up-Gradient of Monitoring Well	Monitoring Well ID	Screened Aquifer
	MW044	Alluvium
	MW055S	Alluvium
	MW055D	Walloon Coal Measures
Off-Base Bremer River. These locations are down-gradient of multiple source areas	MW056S	Alluvium
	MW056I	Tertiary Formation

Table 3-2: Co-located Surface Water and Sediment Monitoring Network

Area	Sample Locations	Number of Locations
On-Base Drains	SD/SW002, SD/SW003, SD/SW008, SD/SW011, SD/SW021, SD/SW027, SD/SW028, SD/SW030, SD/SW033, SD/SW037, SD/SW038, SD/SW041, SD/SW048, SD/SW049, SD/SW053, SD/SW056, SD/SW059, SD/SW064, SD/SW067, SD/SW076, SD/SW079, SD/SW080	22
Warrill Creek	SD/SW004, SD/SW005, SD/SW009, SD/SW015, SD/SW016, SD/SW018, SD/SW020, SD/SW026, SD/SW034, SD/SW043, SD/SW099, SD/SW100	12
Bremer River	SD/SW025, SD/SW036, SD/SW039, SD/SW040, SD/SW045, SD/SW047, SD/SW050, SD/SW051, SD/SW052, SD/SW088, SD/SW089, SD/SW090, SD/SW091, SD/SW094, SD/SW098	15

A summary of the monitoring events completed in comparison to the SAQP has been provided in **Table 3-3**. The corresponding factual reports for the monitoring events have been provided as **Appendix C.**

Table 3-3: Summary of Monitoring Scope

Monitoring Event	Environmental Media / Aspects	SAQP Scope	Samples Collected	Analysis
Biannual Sampling – October/November 2023 Groundwater, Surface Water and Sediment Sampling Event (AECOM, 2024c) (23 October to 29 November 2022)	Groundwater	40 Samples	39	PFAS Suite
	Surface Water	49 Samples	46	
	Sediment	49 samples	49	
	Data Loggers (see **Table 7-3**)	7 downloads	7	NA
Biannual Sampling – April/May 2024 Groundwater, Surface Water and Sediment Sampling Event (AECOM, 2024d)	Groundwater	40 Samples	38	PFAS Suite
	Surface Water	49 Samples	45	
	Sediment	49 samples	48	

Monitoring Event	Environmental Media / Aspects	SAQP Scope	Samples Collected	Analysis
(9 April to 3 May 2023)	Data Loggers (see **Table 7-3**)	7 downloads	7	NA
Well Installation and Maintenance Program – June to July 2024, PFAS OMP, South Queensland (AECOM, 2024e) (11 July 2024)	Groundwater	NA	5	PFAS Suite

3.2 Deviations from SAQP

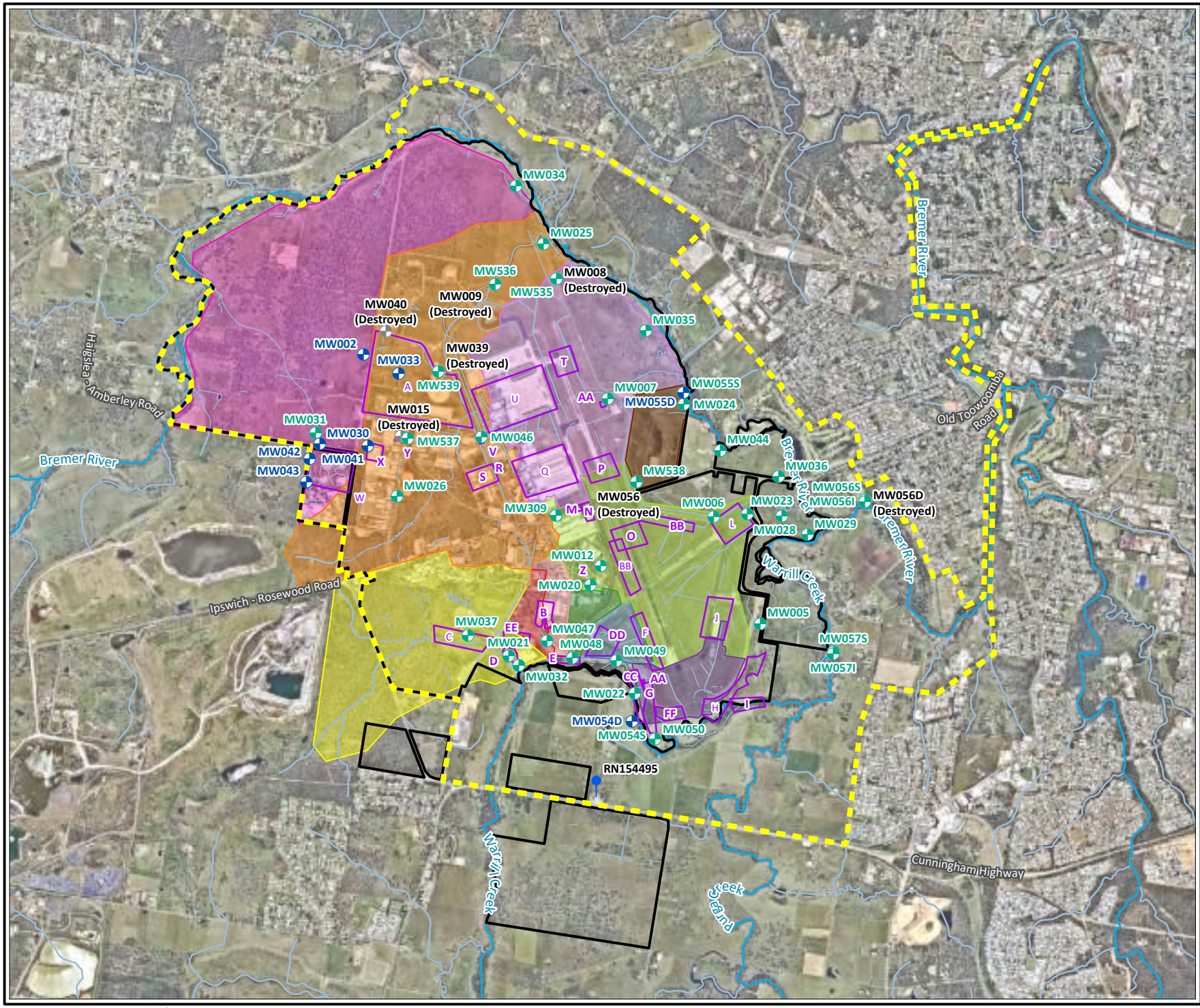
The scope of works complete during the monitoring period complied with the SAQP, with the exceptions detailed in **Table 3-4.**

Table 3-4: Deviations from SAQP - October 2023 to July 2024

Monitoring Event	Location(s)	Deviation	Comment	Impact
Groundwater				
October/November 2023 April / May 2024	MW049	Not sampled	Location inaccessible	Moderate Impact – This deviation reduces the spatial coverage of the groundwater monitoring well network. This location is considered to be a critical as it is the monitoring well located furthest downgradient of the Base. The gatic cover for this well was raised in July 2024 to improve accessibility for future sampling events.
April / May 2024	MW021	Not Sampled	Location inaccessible	Moderate Impact – This deviation reduces the spatial coverage of the groundwater monitoring well network within vicinity of a major source area (CPSA D). The location was inaccessible due to flooded conditions at the time of monitoring. It is anticipated that monitoring well will be able to be monitored in future events. The cover for this monitoring well was noted to be replaced during July 2024.
October/November 2023 April / May 2024	MW006 MW007 MW023	Sample Methodology	Sampled via bailer	Low Impact – PFAS concentrations reported at this location were reported within historical range.
October/November 2023	MW006 MW007 MW023	Sample timing	Sample collection delayed	Low Impact – sample collection was delayed approximately 4 weeks due to availability of a work safety office to supervise airside works. This is

Monitoring Event	Location(s)	Deviation	Comment	Impact
				not considered to significantly impact comparability of results given the relatively short period of time.
October/November 2023 April / May 2024	MW057S MW057I	Sample timing	Sample collection delayed	Low Impact – sample collection was delayed approximately 2- 4 weeks due to establishment of an electric fence by landowner. This is not considered to significantly impact comparability of results given the relatively short period of time.
April / May 2024	MW041 MW023	Sample timing	Sample collection delayed	Low Impact – sample collection was delayed approximately 2 weeks due to access constraints associated with flooding. This is not considered to significantly impact comparability of results given the relatively short period of time.
October/November 2023	MW044	Reduced QA/QC rate	Triplicate analysed by primary lab	No Impact – triplicate analysis rate marginally below 10%.
April / May 2024	MW026	Not Sampled	Sample compromised	Moderate Impact – This deviation reduces the spatial coverage of the groundwater monitoring well network within the central portion of the base, downgradient of major source area (CPSA W).
July 2024	MW535 MW536 MW537 MW539	Additional monitoring wells	Newly installed replacement wells monitored	No Impact – The monitoring of newly installed replacement groundwater wells does not impact the existing well monitoring well network, rather increases the spatial coverage.
Surface Water				
October/November 2023	SW041 SW052 SW091	Not sampled	Location dry / location inaccessible	Low Impact – upstream and downstream locations were samples during this monitoring event.
April / May 2024	SW033 SW038 SW048 SW067	Not sampled	Location dry / location inaccessible	Low Impact – upstream and downstream locations were samples during this monitoring event.
Sediment				
October/November 2023	SD049	Not analysed	Laboratory receipt error	Low Impact – co-located surface water sample was collected at this location.
April / May 2024	SD048	Not Sampled	No sediment	Low Impact – co-located surface water sample was collected at this location.
Other				
October/November 2023	MW056S	Partial logger retrieval	Equipment malfunction	Moderate Impact – this deviation reduces the availability of the of

Monitoring Event	Location(s)	Deviation	Comment	Impact
				groundwater level data at the off-base location adjacent to Warrill Creek between February and October 2023.
April / May 2024	MW055D	Partial logger retrieval	Equipment malfunction	Moderate Impact – this deviation reduces the availability of the of groundwater level data adjacent to the Bremer River in the eastern portion of the base between December 2023 and April 2024.



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

- Tertiary Formation / Alluvium
- Walloon Coal Measures
- Destroyed
- Registered Groundwater Bore

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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0 500 1,000
metres

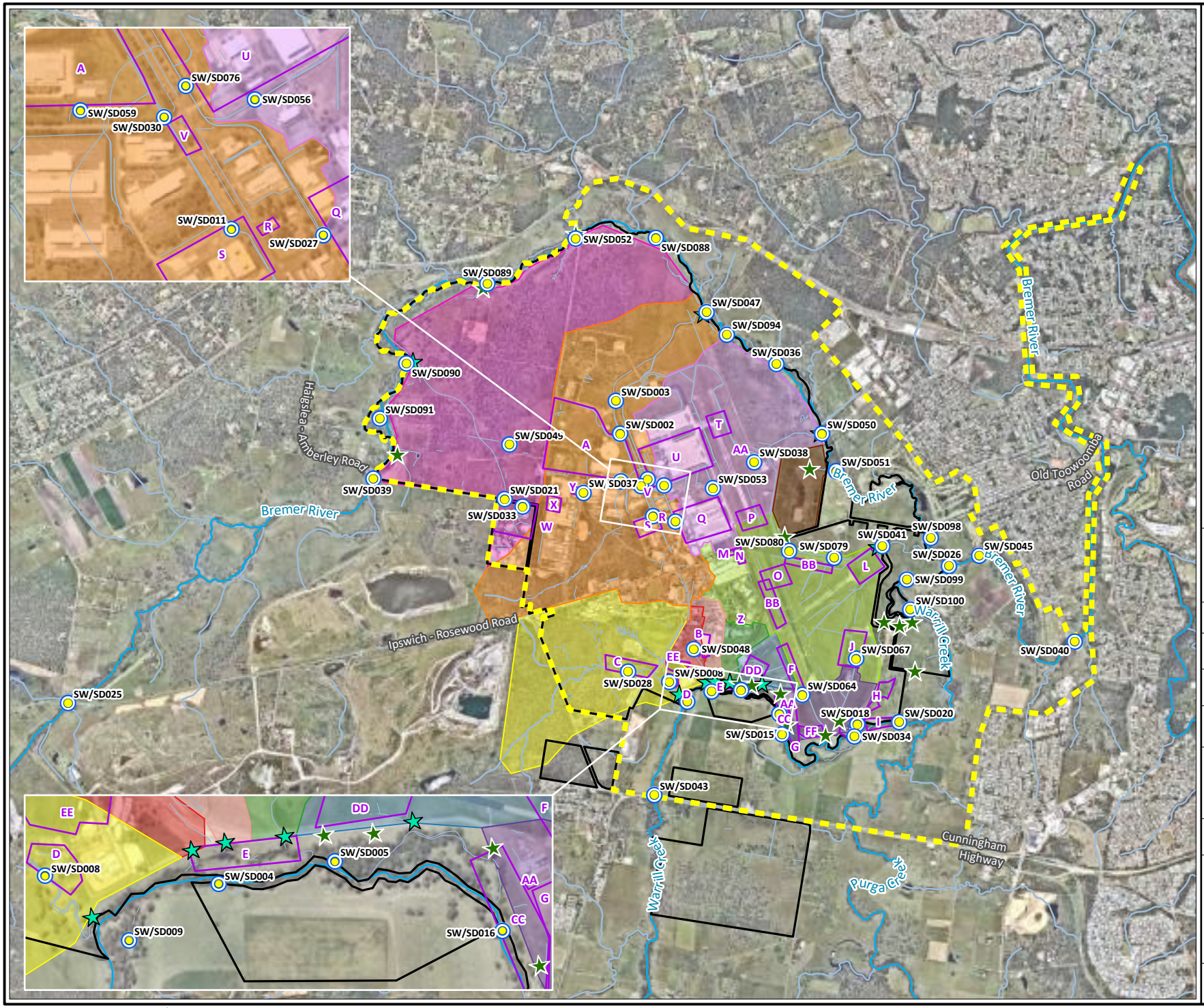
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

GROUNDWATER MONITORING WELL LOCATIONS

FIGURE 7

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_07_GWLocs
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Sediment Sample Location
- Surface Water Sample Location
- Major Discharge Point
- Minor Discharge Point
- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 1,000 2,000

metres

Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS

FIGURE 8

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_08_SWSDLocs
Reference: www.nearmap.com - Imagery Date: 03/06/2024

4. Quality Assurance and Quality Control

4.1 Data Reliability Process

An assessment of data reliability is critical to inform the use and interpretation of the data collected as part of the OMP. Data Quality Indicators (DQIs) are presented within the SAQP (AECOM 2024b) and include assessment of the following:

- Documentation and data completeness; and
- Data Quality – comparability, representativeness, precision, and accuracy of the analytical data.

The project target for data reliability is 95% compliance with the DQIs.

4.2 Data Reliability Summary

Data reliability assessment pertaining the OMP data collected over the monitoring period has previously been completed and discussed within AECOM (2024c), AECOM (2024d) and AECOM (2024e) (see **Appendix C**).

The data reliability assessments completed have concluded that there are no significant errors associated with data collected of laboratory analysis of the samples. As such, the analytical results reports are considered to be representative of Base conditions and the data set is adequately reliable for the objective of this OMR.

5. Assessment Criteria

5.1 Groundwater and Surface Water

Assessment criteria adopted for groundwater and surface water are detailed within the SAQP (AECOM, 2024b), and summarised in **Table 5-1** below. The assessment criteria were adopted in consideration of the following guidance:

- National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) 1999, Schedule B1, as amended in 2013 (NEPC, 2013); and
- PFAS NEMP, Version 2.0, January 2020 (HEPA, 2020).

The adopted assessment criteria are in accordance with the PFAS screening criteria nominated in the PMAP (Defence, 2020).

Table 5-1: Groundwater and Surface Water Assessment Criteria

Environmental Media	Exposure Scenario	Adopted Assessment Criteria (µg/L)			Guidance
		PFHxS + PFOS	PFOS	PFOA	
	Human Health Receptors				
Groundwater and Surface Water	Drinking Water[1]	0.07		0.56	HEPA (2020)
Surface Water	Recreational Use	2		10	HEPA (2020)[2]
	Ecological Receptors				

Groundwater and Surface Water	Freshwater (95 % species protection)	0.13	220	HEPA (2020)
Groundwater and Surface Water	Freshwater (99% species protection)	0.00023	19	HEPA (2020)

Notes:
1. Drinking water screening guidelines have been adopted for screened purposes for Industrial Water use, Stock Water use and Agriculture/Parks/Gardens water use;
2. Criteria sourced from National Health and Medical Research Council (NHMRC) (2019)

5.2 Sediment

At the time of this report, there are currently no nationally endorsed criteria for screening of risk posed to human health or the environment by PFAS in sediment.

6. Context and Ancillary Information

6.1 Mass Flux Assessment

A mass flux study was conducted in 2023, as documented in the mass flux study (Senversa, 2023). A mass flux study is a technical investigation which identifies how PFAS is migrating across an area and is critical for informing PFAS management approaches. The mass flux study can be summarised as follows:

- The Base was divided into 11 surface water catchments, consistent with historical investigations across the base dating back to 2018 (CH2M Hill, 2018);
- Field investigations were conducted to further investigate the nature and extent of PFAS contamination across the base, inclusive of topographical survey, mapping of stormwater infrastructure and sampling / analysis;
- Mass flux calculations were conducted to determine the total mass[3] of contaminants migrating from different areas of the base in surface water and groundwater. These calculations consider point in time concentration data but also consider other factors (e.g. flow rate) to allow for the identification of areas which require remediation or management;
- The mass flux calculations identified that:
    - 99% of the PFAS mass flux from the base is via surface water, with the remaining 1% via groundwater;
    - Of the PFAS mass flux via surface water:
        - 56 % originates from Catchment 3 (inclusive of CPSA N);
        - 24 % originates from Catchment 8 (inclusive of CPSA A and CPSA V); and
        - 6.6 % originates from Catchment 7 (inclusive of CPSA D).

The findings of the mass flux study align with what may reasonably be expected, with the largest areas of the base where significant firefighting foam related activities have been undertaken (i.e. training, fire suppression systems) representing the most significant PFAS mass flux sources.

The mass flux study recommended that remediation focuses upon the key catchment areas noted above.

[3] Total mass includes the sum of up to 30 PFAS compounds.

The following table (**Table 6-1**) provides further details regarding the mass flux study for reference when reading this OMR.

Table 6-1: Summary of Mass Flux Assessment

Media	Catchment / Transect	Area (m^2)	Main Feature/s of Interest	Discharge Point in Catchment	Annual Discharge (kg/year)	Annual Discharge (% of Media Type)	Annual Discharge (% of Total)
Surface Water	Catchment 1	4,950,000	Hansen Farm Conservation Area CPSA W (southern portion) West of CPSA A Adjacent to Bremer River	DP1 – DP4	0.012	<1%	<1%
	Catchment 2	250,000	CPSA DD, CPSA F Adjacent to Warrill Creek	DP18 – DP20	0.094	<1%	<1%
	Catchment 3	2,200,000	Southern portion of Airside CPSA Z, CPSA P, CPSA M, CPSA N, CPSA BB, CPSA O, CPSA BB, CPSA F, CPSA J, CPSA L	DP8 – DP9	12	57%	56%
	Catchment 4	180,000	South West of Catchment 3 Adjacent to Warrill Creek	DP21	0.36	1.8%	1.7%
	Catchment 5	180,000	West of Catchment 4 CPSA B Adjacent to Warrill Creek	DP22	0.004	<1%	<1%
	Catchment 6	190,000	West of Catchment 5 CPSA B, CPSA EE Adjacent to Warrill Creek	DP23	0.17	<1%	<1%
	Catchment 7	2,500,000	South western portion of base CPSA C, CPSA D and CPSA EE Adjacent to Warrill Creek	DP24	1.4	6.7%	6.6%
	Catchment 8	4,750,000	Between Airside and Hansen Farm Reservation Area CPSA Q, CPSA R, CPSA S, CPSA V, CPSA X, CPSA Y, CPSA U, CPSA A Adjacent to Bremer River (north eastern portion only)	DP5	5.1	25%	24%

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Media	Catchment / Transect	Area (m^2)	Main Feature/s of Interest	Discharge Point in Catchment	Annual Discharge (kg/year)	Annual Discharge (% of Media Type)	Annual Discharge (% of Total)
	Catchment 9	2,630,000	Northern portion of Airside CPSA P, CPSA A, CPSA U, CPSA T, CPSA AA Adjacent to Bremer River (north eastern portion)	DP6	0.94	4.6%	4.5%
	Catchment 10	490,000	CPSA AA, CPSA G, CPSA FF, CPSA H Southern End of Runway Adjacent to Warrill Creek	DP14 – DP17	0.74	3.6%	3.5%
	Catchment 11	410,000	East of Catchments 3 and 9 (Airside) Adjacent to Bremer River	DP7	0.052	<1%	<1%
Groundwater	Total (A-A' & B-B')				0.26	100%	1.2%
Total (Annual Average Estimation)					21	NA	100%

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6.2 Remediation Projects

6.2.1 General

Works were undertaken to address PMAP recommendations during 2023-2024, inclusive of:

- Establishment and/or operation of PFAS treatment plants at fire training pads; and
- Commencing construction of a new Sewage Treatment Plant (STP) with PFAS treatment capability.

6.2.2 PFAS Treatment Plants

PFAS treatment plants were established to capture and treat wastewater generated from firefighting training activities on the pads in Catchment 7 (CPSA A) and Catchment 1 (CPSA W). The CPSA A plant was commissioned in November 2022 and operated throughout the 2023-2024 OMR period. The CPSA W plant was established in December 2023 and operated for the remainder of the 2023-2024 OMR period. The treatment plants are understood to be a temporary measure to be employed until a permanent solution is in effect.

6.2.3 New Sewage Treatment Plant

Construction of a new STP commenced during late 2022 and continued throughout the 2023-2024 OMR period. The new STP is being constructed to the north east of the existing STP. The new STP has been designed with PFAS treatment capability and is anticipated to be commissioned during early 2025. The STP will receive and treat PFAS impacted wastewater overflows from Base. The construction works include management of PFAS contaminated stockpiles generated from nearby construction projects. At the time of this report, stockpiles straddle the Catchment 6 and Catchment 7 boundary.

6.3 Infrastructure Projects

Any infrastructure works involving soil disturbance and reuse, movement and stockpiling of soil on-Base are managed as per Defence environmental guidelines including the Defence PFAS Construction and Maintenance Framework (Defence, 2021), the Defence Contamination Management Manual (Defence, 2018 amended 2021) (in particular Annex K which details the management, reuse and stockpiling of PFAS impacted soil) and the Pollution Prevention Management Manual (Defence, 2017).

No major infrastructure works relevant to PFAS remediation or management were conducted during the 2023-2024 period with the exception of PFAS treatment plant operation (see **Section 6.2.2**) and new STP construction works (see **Section 6.2.3**). A summary of historical infrastructure projects is provided as **Appendix D.**

6.4 Significant Weather Events

Monthly rainfall measurements recorded at the Amberley Atlantic Multidecadal Oscillation (AMO) weather station (Station Number 040004) between January 2023 and July 2024 were obtained from the Bureau of Meteorology (BoM), as shown in **Figure 9.** The long term mean monthly rainfall (1941 to 2024) has also been illustrated, with the mean annual rainfall at the Amberley AMO weather station recorded to be 866.2 mm per year. In addition, the mean monthly discharge (ML/day) recorded for the Bremer River at Walloon (monitoring station 143107A) was obtained from Queensland Government Water Monitoring Information Portal.

In relation to the monitoring period, it is noted that rainfall reported for the months of October 2023, November 2023, December 2023, January 2024 and April 2024 was greater than two times the mean monthly rainfall for the corresponding period.

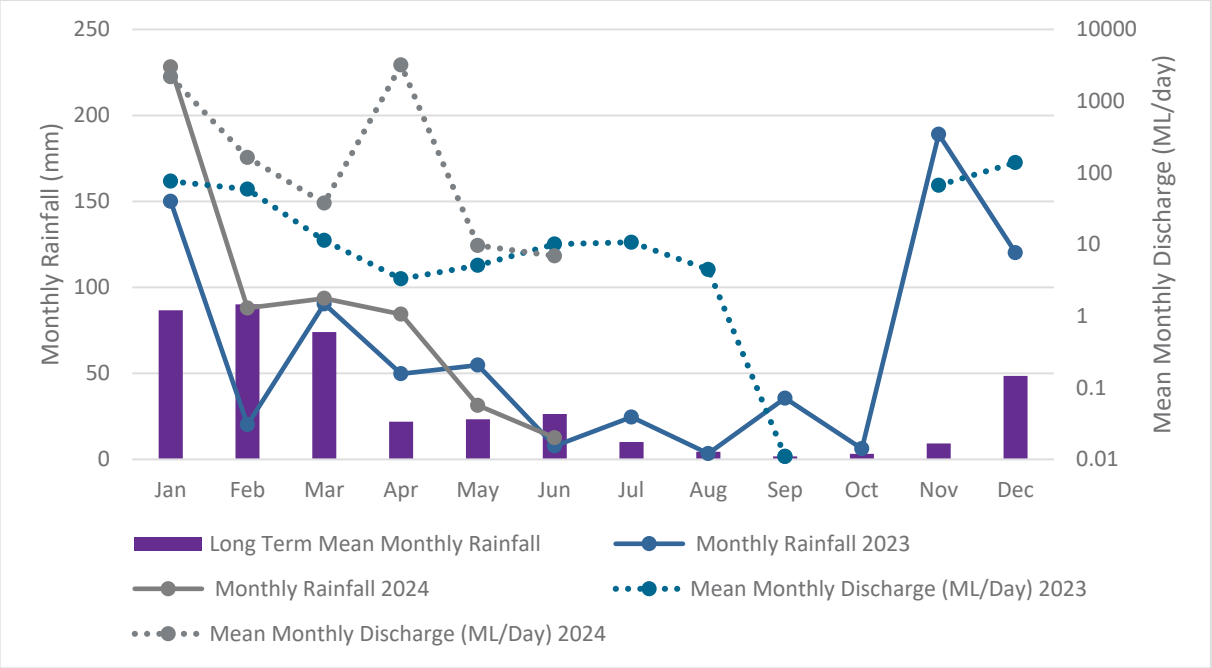


Figure 9: Monthly Rainfall at Amberley AMO (Station Number 040004) and Mean Monthly Discharge at Bremer River at Walloon (143107A)

7. Monitoring Data Summary

7.1 Concentration Changes

Concentration changes with respect to historical monitoring events have been assessed for surface water, sediment and groundwater. Where a new historical maximum or minimum concentration has been identified, the percentage difference between the current and historical result has been calculated.

For laboratory analytical results, there are a number of factors that influence how accurate the result is. Every step undertaken in the analysis of a sample is subject to some (small) level of error. As such, every laboratory analytical result has an acceptable error to the 'true' result. Where a new historical maximum concentration has been identified, consideration has been given to whether the new historical maximum concentration is greater than or less than the acceptable data error for the previous historical maximum concentration (i.e.30%)[4]. Where the new maximum concentration is greater than 30% of the historical maximum concentration, the new maximum is considered to require further consideration.

7.2 Groundwater

7.2.1 Groundwater Physiochemical Field Parameters

Groundwater quality field parameters recorded during the monitoring period have been presented in **Table A1**, **Appendix A.** A summary of results has been presented in **Table 7-1**.

[4] Quality control data is used to assess the likely level of error, with acceptable level of data error typically up to +/- 30% the certified reference method (ASC NEPM (2013), Schedule B3).

Table 7-1: Summary of Groundwater Quality Parameters

Aquifer	Event	DO (mg/L)	EC (µs/cm)	pH	Eh (mV)	Temp
Alluvium	Oct/Nov 2023	0.22 (MW037) – 7.98 (MW036) *Anaerobic to aerobic conditions*	521 (MW050) – 7,585 (MW037) *Fresh to brackish*	6.49 (MW048) – 7.69 (MW036) *Near neutral*	7.49 (MW034) – 408.1 (MW036) *Mildly to moderately reducing*	19.0 (MW032) – 27.2 (MW034)
	Apr/May 2024	0.59 (MW044) – 3.41 (MW025) *Anaerobic to aerobic condition*	324 (MW044) – 7,289 (MW037) *Fresh to brackish*	6.30 (MW057S) – 7.94 (MW006) *Near neutral*	63.1 (MW044) – 208 (MW025) *Mildly to moderately reducing*	21.0 (MW006) – 25.3 (MW029)
	Jul 2024	2.26 (MW538) – 3.46 (MW535)	2147 (MW535) – 16178 (MW538)	6.14 (MW538) – 7.42 (MW536)	334.9 (MW536) – 387.2 (MW538)	21.4 (MW536) – 22.8 (MW538)
Tertiary Formation	Oct/Nov 2023	0.95 (MW046) – 3.19 (MW020) *Anaerobic to aerobic condition*	597 (MW056I) – 23,941 (MW026) *Fresh to Saline*	6.45 (MW047) – 7.47 (MW020) *Near neutral*	129.8 (MW012) – 276.2 (MW309) *Mildly to moderately reducing*	21.6 (MW309) – 26.4 (MW056I)
	Apr/May 2024	0.36 (MW056I) – 3.54 (MW309) *Anaerobic to aerobic condition*	327 (MW056I) – 24,303 (MW026) *Fresh to saline*	6.43 (MW026) – 7.21 (MW056I) *Near neutral*	-3.1 (MW012) – 278 (MW026) *Mildly to strongly reducing*	21.4 (MW031) – 28.3 (MW020)
	Jul 2024	3.02 (MW537) – 6.04 (MW539)	4717 (MW539) – 25997 (MW537)	6.29 (MW539) – 6.38 (MW537)	631.3 (MW539) – 398.6 (MW537)	22.7 (MW539) – 23.5 (MW537)
Walloon Coal Measures	Oct/Nov 2023	0.57 (MW030) – 3.22 (MW041) *Anaerobic to aerobic condition*	875 (MW054D) – 22,852 (MW030) *Fresh to saline*	6.47 (MW002) – 7.31 (MW055D) *Near neutral*	81.1 (MW033) – 378 (MW030) *Mildly to moderately reducing*	22.9 (MW054D)– 27.9 (MW030)
	Apr/May 2024	0.55 (MW054D) – 3.50 (MW030) *Anaerobic to aerobic condition*	65 (MW055D)– 21,242 (MW030) *Fresh to saline*	6.42 (MW002) – 7.21 (MW055D) *Near neutral*	72.9 (MW054D)– 295 (MW041) *Mildly to moderately reducing*	21.7 (MW055D) – 25.4 (MW043)

In summary, groundwater parameters recorded over the monitoring period indicate the following:

- Alluvium / Tertiary formations – characterised by near neutral, fresh to brackish, anerobic to slightly aerobic conditions and reducing conditions. It is noted that the Eh readings were typically higher in April/May 2024 by comparison to October / November 2023 and was noted to vary significantly. Additionally, monitoring well MW026 has been reported to be screened within the tertiary formation; however has been identified to be consistently more saline by comparison;
- Walloon Coal Measures – characterised by near neutral, brackish to saline, anerobic to slightly aerobic conditions and reducing conditions. Salinity varied significantly, however, is noted to be more saline in comparison to the Alluvium-Tertiary Formation.

7.2.2 Groundwater Elevation and Flow Direction

7.2.2.1 Depth to Groundwater

Standing water levels (SWLs) are measured in terms of m below top of casing (mBTOC) and then converted into a relative level in order to determine groundwater flow directions (see **Section 7.2.2.2**). SWLs vary significantly across the Base and off-Base areas. The SWL within the Management Area which are located off-base in the alluvium adjacent to Bremer River and Warrill Creek can be summarised as follows:

- Bremer River: Ranges between 5.7 to 11.73 meters (18.7 – 38.5 feet) below top of casing in areas adjacent to the Base.
- Warrill Creek: Typically 5.4 to 5.6 meters (17.2 – 18.37 feet) below top of casing in areas adjacent to the Base.

7.2.2.2 Groundwater Elevations

Groundwater elevation data calculated from field gauging records has been presented in **Table A1**, **Appendix A** and **on Figure 10 A-D**. Groundwater elevations within on-Base aquifers are consistent between monitoring rounds, indicating limited influence of wet and dry season climate conditions. The groundwater elevations are consistent with previous monitoring events.

Based on review of groundwater elevations:

- Alluvium / Tertiary Formation:
    - MW026 consistently reports higher groundwater elevation by comparison to other groundwater monitoring wells screened within the tertiary formation. Based on the higher salinity and relatively higher groundwater levels, groundwater within MW026 is considered to be relatively slow moving. As such, MW026 is unlikely to significantly contribute to off-Base groundwater flow. For this reason, MW026 has not been included contours for the Alluvium-Tertiary Formation;
    - Groundwater elevation data for MW535 through to MW539 were not used to model groundwater contours due to the difference in sample date (i.e. the groundwater wells were replacement wells installed in July and monitored approximately 2-3 months following the balance of the OMP groundwater monitoring well network);
    - Groundwater elevation data for monitoring wells located on the eastern side of Bremer River (MW056S/I) and southern side of Warrill Creek (MW054S/D, MW057S/I) were not used to model groundwater contours due to the influence of Bremer River and Warrill Creek;
    - Groundwater elevation data was not available for the following wells:
        - MW049 – monitoring well unable to be located; and
        - MW007 – monitoring well not sampled in October 2023.
- Walloon Coal Measures:
    - There is significant variability of groundwater elevations for wells screened within the Walloon Coal Measures (e.g. 17m head difference between MW042 and MW043). This indicates a complex system characterised by high (fractures and bedding planes) and low (rock mass) hydraulic conductivity zones. Considering this variability and the number of wells within the Walloon Coal Measures it is considered that preparation/presentation of groundwater contours is not justified.

Table 7-2: Summary of Groundwater Elevations October 2023 – July 2024

Sampling Event	Range in Groundwater Elevation (mAHD)[5]		
	Alluvium	Tertiary Formation	Walloon Coal Measures
Oct/Nov 2023	9.032 (MW029) – 17.844 (MW037)	8.254 (MW056I) – 28.980 (MW026)	13.839 (MW055D) – 37.517 (MW043)
Apr/May 2024	8.920 (MW005) – 18.055 (MW037)	8.681 (MW056I) – 28.997 (MW026)	13.747 (MW055D) – 36.821 (MW043)
Jul 2024	13.320 (MW538) – 17.470 (MW536)	19.390 (MW539) – 19.730 (MW537)	N/A

7.2.2.3 Continuous Level Logging

In accordance with the SAQP, continuous level loggers were installed within targeted wells. Hydrographs generated from the level logging data are presented in **Appendix F** alongside rainfall data sourced from the Amberley AMO) weather station (Station Number 040004). Observations have been summarised in **Table 7-3**.

Table 7-3: Summary of Continuous Level Logging

Type	Well	Aquifer Unit	Comment (all groundwater elevation references are mAHD)
Un-paired locations	MW025 (on-base Bremer River)	Alluvium	Groundwater elevations at this location ranged between 15.91 to 16.3 between May 2023 and April 2024. No significant response to rainfall events were observed over this period.
	MW028	Alluvium	Groundwater elevations at this location ranged between 10.08 to 10.67 between May 2023 and April 2024. An increase in groundwater elevation was observed from the 28 January 2024 following a rainfall event, whereby, groundwater levels have since remained elevated.
	MW032	Alluvium	Groundwater elevations at this location ranged between 16.23 to 18.79 between May 2023 and April 2024. Event based increases in groundwater elevation were recorded from late December 2023 in response to rainfall events.
Paired locations	MW055S	Alluvium	Groundwater elevations at this location ranged between 13.2 to 15.48 between June 2023 and April 2024. Event based increases in groundwater elevation were recorded from late December 2023 in response to rainfall events.
	MW055D	Walloon Coal Measures	Continuous level data not available from this location between December 2023 and April 2024 due to equipment malfunction.

[5] m Australian Height Datum

Type	Well	Aquifer Unit	Comment (all groundwater elevation references are mAHD)
	MW056S	Alluvium	Groundwater elevations at this location ranged between 8.44 to 12.41 between November 2023 and April 2024. An increase in groundwater levels were observed from mid-November through to December following corresponding rainfall events. Similarly, groundwater elevations increased in February following rainfall events.
	MW056I	Tertiary Formation	Groundwater elevations at this location ranged between 5.49 to 8.01 between November 2023 and April 2024. An increase in groundwater elevation was observed from the 28 January 2024 following a rainfall event.

7.2.2.4 Groundwater Flow Direction

Groundwater contours for the Alluvium / Tertiary Formation and groundwater elevations for the Walloon Coal Measure have been provided as **Figure 10 A-D**. In summary:

- The Alluvium/ Tertiary Formation form part of a single hydrogeological unit, with groundwater flowing from the topographical high in western portion of the base where the Tertiary Formation is the upper aquifer material to the lower areas in the northeast, east and southeast where the Alluvium forms the upper portion of the aquifer;
- The Walloon Coal Measures represent a highly complex system which is recharged by leakage from upper formations. There is a potential for direct recharge of the Walloon Coal Measures via rock outcropping. The extent of outcropping in the vicinity of the Base has not been mapped as part of historical investigation work and as such the extent of outcropping and associated direct recharge is unclear.

7.2.3 Groundwater Analytical Results

Groundwater analytical results are presented in **Table A2**, **Appendix A.** A Summary of the analytical results has been provided in **Table 7-4** and illustrated on **Figure 11 A-D** and **Figure 12 A-D**. An interpretive assessment of data has been provided in **Section 8**. Deviations from the historical groundwater data set has been summarised in the **Table 7 5**.

Table 7-4: Summary of PFAS Concentrations in Groundwater

Compound	Sample Event	No. Samples (n)	Concentration Range (µg/L)	No. Sample with Conc. >LOR	No. Samples with Conc. > Drinking Water Criteria	No. Samples with Conc. > 99% Species Protection Criteria	No. Samples with Conc. > 95% Species Protection Criteria
Alluvium / Tertiary Formation							
PFOA	Oct/Nov 2023	48	<0.01 – 14.2	20	9	0	0
	Apr/May/Jul 2024	41	<0.01 – 3.17	18	6	0	0
PFOS	Oct/Nov 2023	48	<0.01 – 195	29	NA	29	25
	Apr/May/Jul 2024	41	<0.01 – 79	27	NA	27	22
PFHxS+PFOS	Oct/Nov 2023	40	<0.01 – 247	30	22	NA	NA
	Apr/May/Jul 2024	38	<0.01 – 106	30	27	NA	NA
Walloon Coal Measures							
PFOA	Oct/Nov 2023	8	<0.01 – 1.41	1	1	0	0
	Apr/May/Jul 2024	9	<0.01 – 0.01	1	0	0	0
PFOS	Oct/Nov 2023	8	<0.01 – 0.41	6	NA	6	1
	Apr/May/Jul 2024	10	<0.01 –0.33	5	NA	5	4
PFHxS+PFOS	Oct/Nov 2023	8	<0.01 – 11.7	6	3	NA	NA
	Apr/May/Jul 2024	9	<0.01 –13.7	5	4	NA	NA

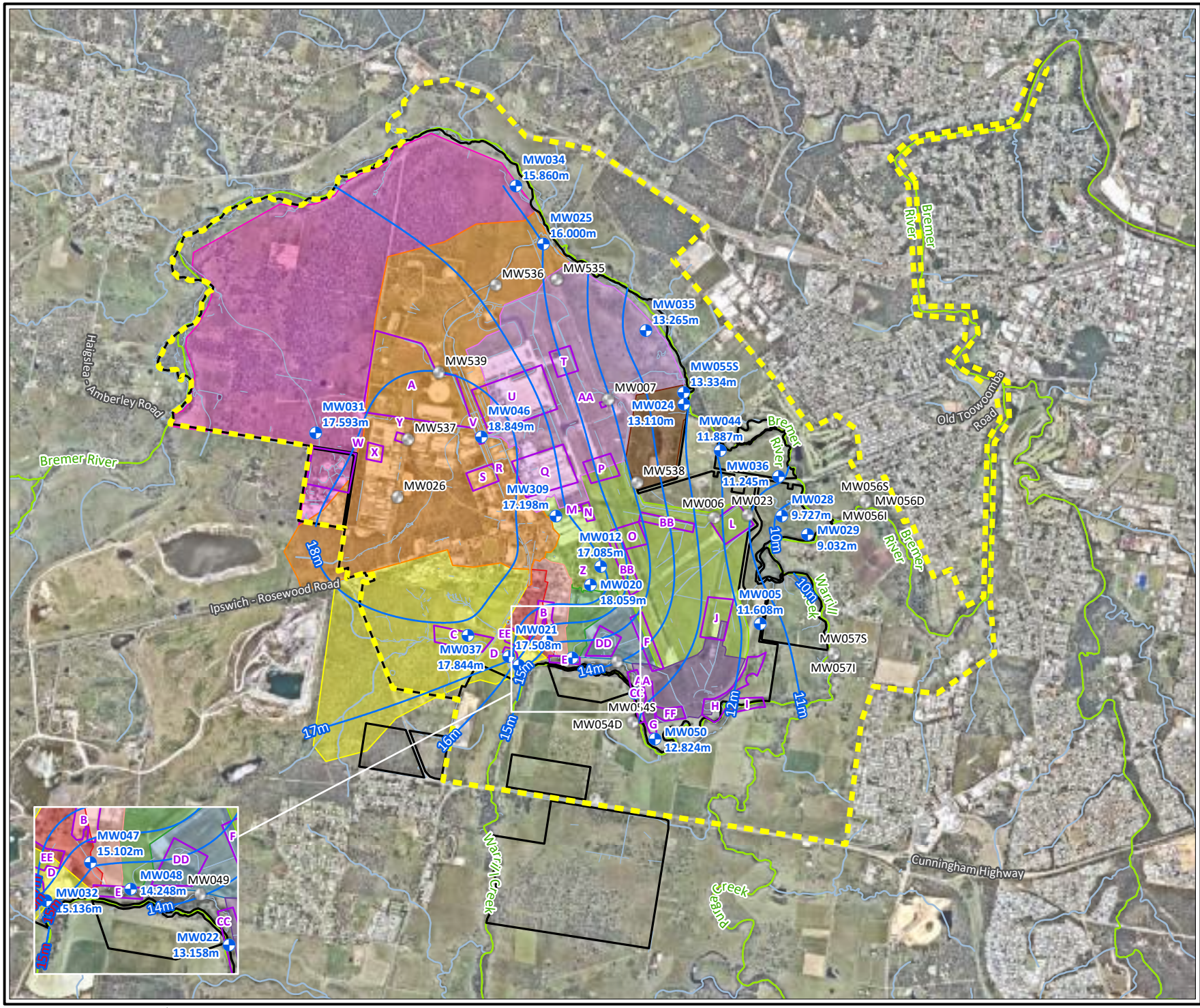
Note: No. Samples includes Quality assurance samples, NA = Not Applicable

Table 7-5: Summary of Deviation from Historical Groundwater Data

Aspect	PFOA (µg/L / % increase or decrease from previous minimum/maximum)	PFOS (µg/L / % increase or decrease from previous minimum/maximum)	PFHxS+PFOS (µg/L / % increase or decrease from previous minimum/maximum)
October / November 2023			
First-time Detection (µg/L)	None	None	None
First-time Ecological Criteria Exceedance	None	None	None
First-time Human Health Exceedance	None	None	None
New Historical Minimum	None	None	None
New Historical Maximum	MW020 (6.16 µg/L / 10.1%) MW021 (4.72 µg/L / 6.1%) MW030 (1.41 µg/L / 2.9 %) MW055S (0.08 µg/L / 14.3%)	MW020 (97.7 µg/L / 12.2%) **MW021 (148 µg/L / 59.5%)** MW025 (1.09 µg/L / 2.8%) **MW030 (0.41 µg/L / 70.8%)** MW055S (1.01 µg/L / 1%)	MW020 (146 µg/L / 9%) **MW021 (191 µg/L / 34.5%)** MW055S (2.4 µg/L / 21.2%)
April / May 2024			
First-time Detection (µg/L)	MW041 (0.01 µg/L)	None	None
First-time Ecological Criteria Exceedance	None	MW042 (0.15 µg/L)	None
First-time Human Health Exceedance	None	None	MW042 (0.21 µg/L) MW036 (0.08 µg/L)
New Historical Minimum	**MW046 (2.18 µg/L / -79.9%)** MW048 (0.03 µg/L / -25%)	**MW046 (26.8 µg/L / -69.2%)** MW048 (1.5 µg/L / -6.3%)	**MW046 (36.3 µg/L / -70%)**
New Historical Maximum	MW041 (0.01 µg/L / NA)	MW025 (1.39 µg/L / 27.5%) MW041 (0.33 µg/L / 10%) **MW042 (0.15 µg/L / 200%)**	MW025 (2.46 µg/L / 0.8%) MW030 (13.7 µg/L / 6.2%) **MW036 (0.08 µg/L / 33.3%)** MW041 (0.49 µg/L / 11.4%)

Aspect	PFOA (µg/L / % increase or decrease from previous minimum/maximum)	PFOS (µg/L / % increase or decrease from previous minimum/maximum)	PFHxS+PFOS (µg/L / % increase or decrease from previous minimum/maximum)
		MW055D (0.03 µg/L / 50%) MW055S (1.12 µg/L / 12%)	**MW042 (0.21 µg/L / 228.5%)** **MW055D (0.06 µg/L / 50%)** **MW055S (2.72 µg/L /37.4%)**

Note: **Bold** text indicates an exceedance of the acceptable level of error (+/- 30%, refer **Section 7.1**).



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- Inferred Groundwater Contour (mAHD)
- Confirmed Primary Source Area
- PFAS Management Area Plan Boundary
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

- Used in modelling (RWL indicated, mAHD)
- Not used in modelling

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

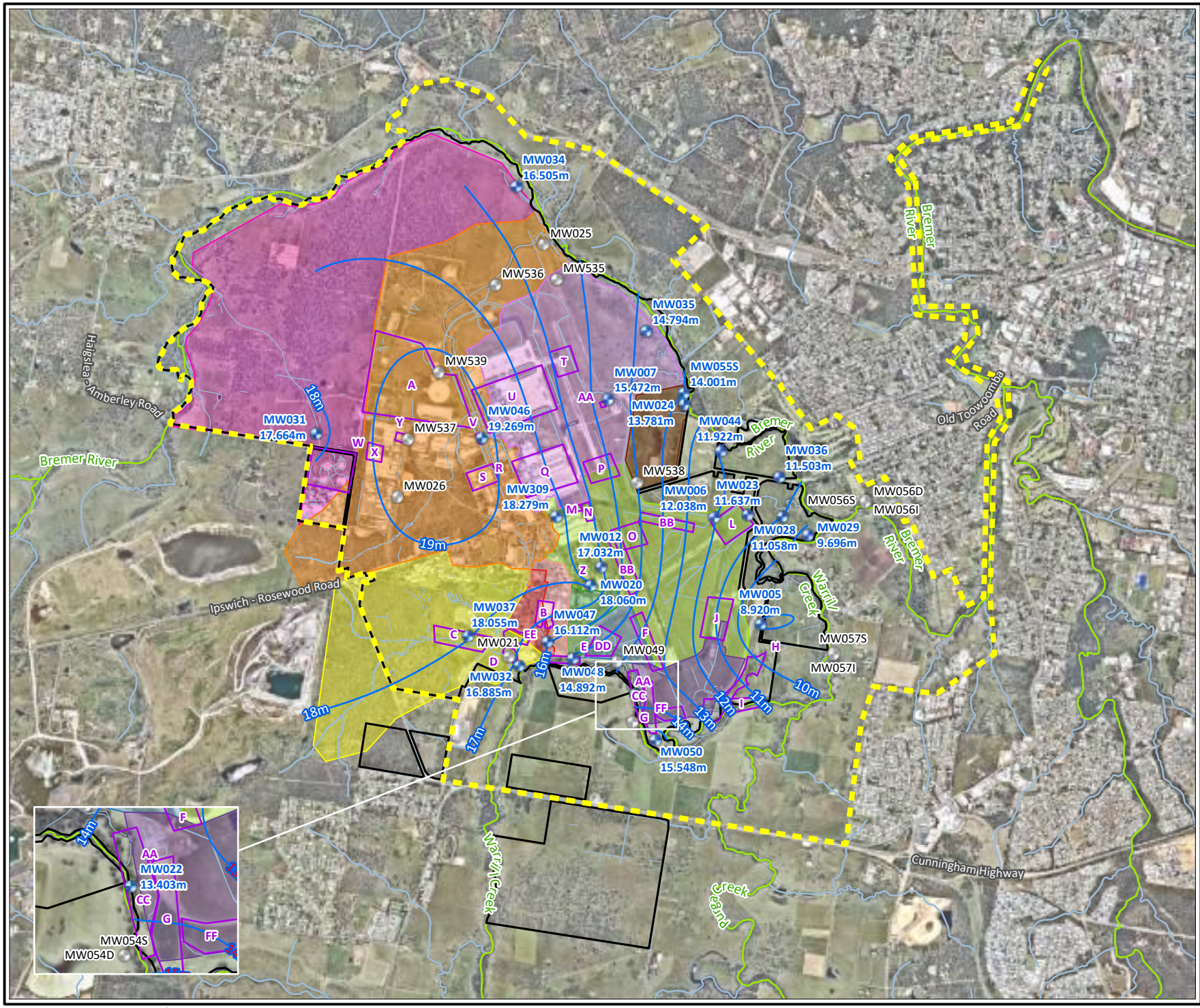
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

GROUNDWATER CONTOURS, ALLUVIUM / TERTIARY FORMATION (OCTOBER, 2023)

FIGURE 10A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_10A_GWContAlluTertOct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



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Job No: 66133

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Scale 1:48,000

0 500 1,000
metres

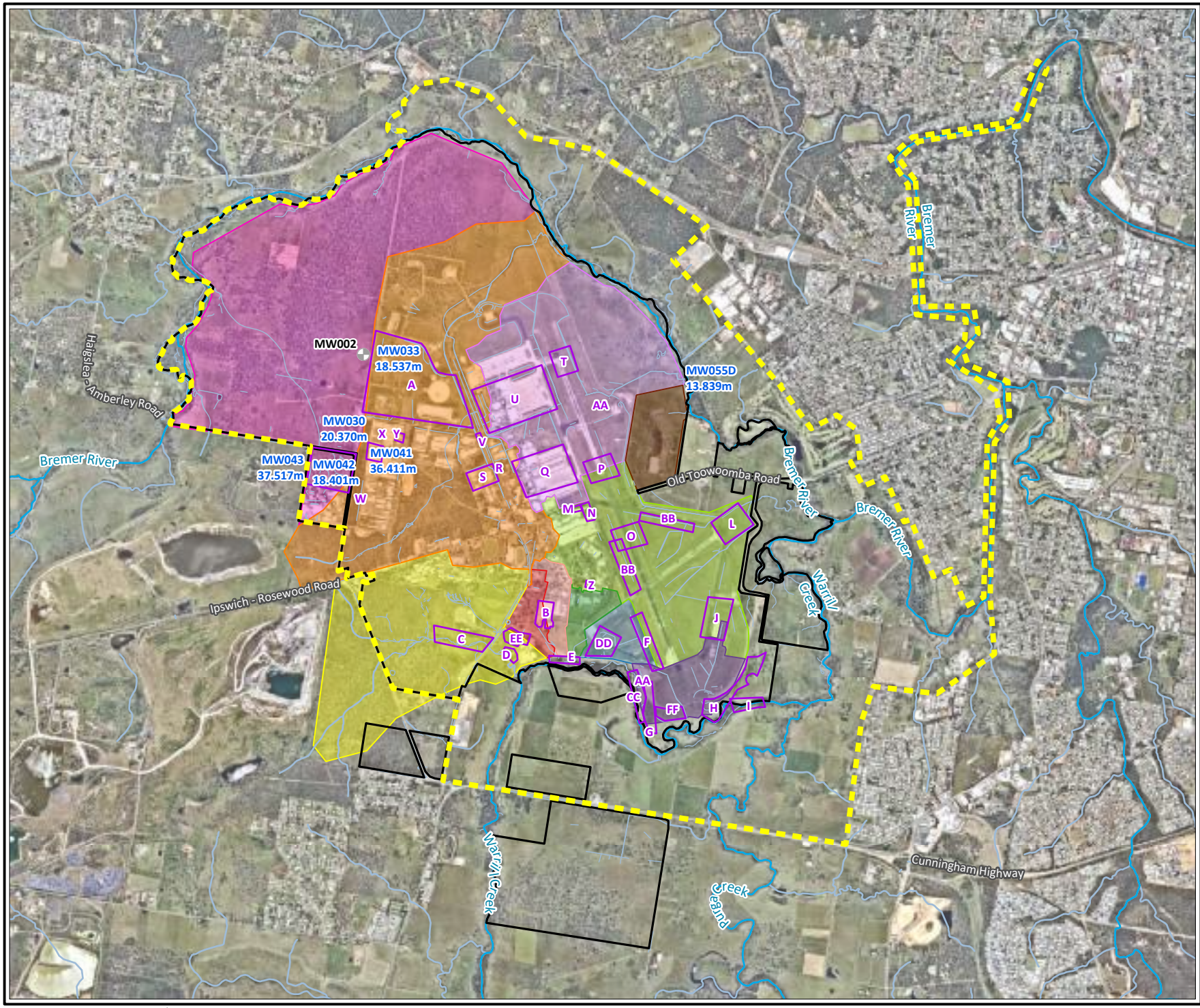
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

GROUNDWATER CONTOURS, ALLUVIUM / TERTIARY FORMATION (APRIL, 2024)

FIGURE 10B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_10B_GWContAlluTertApr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

- Not modelled

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

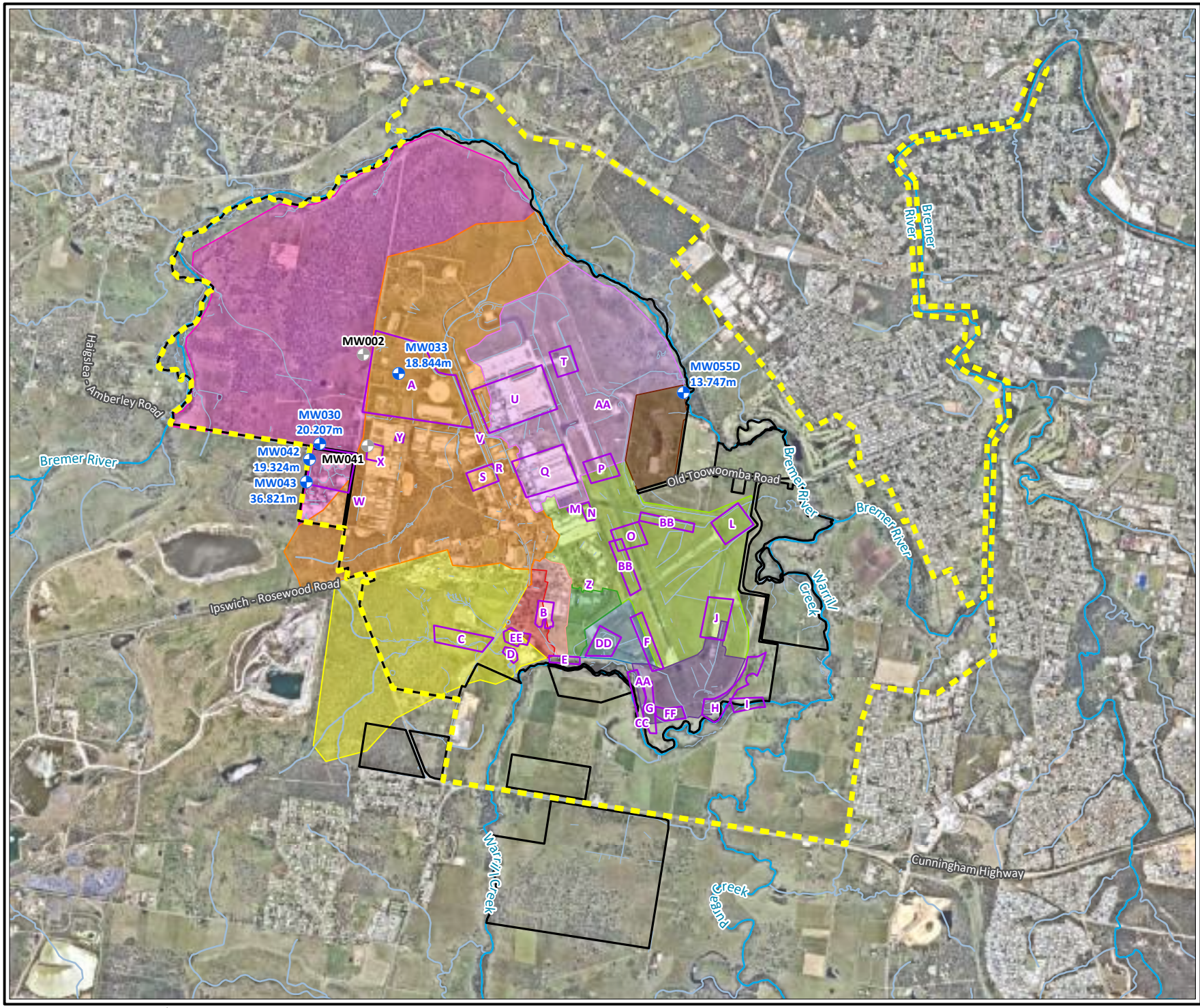
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

GROUNDWATER ELEVATIONS WALLOON COAL MEASURES (OCTOBER, 2023)

FIGURE 10C

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_10C_GWContWalloonOct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

- RWL indicated, mAHD
- Not measured

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

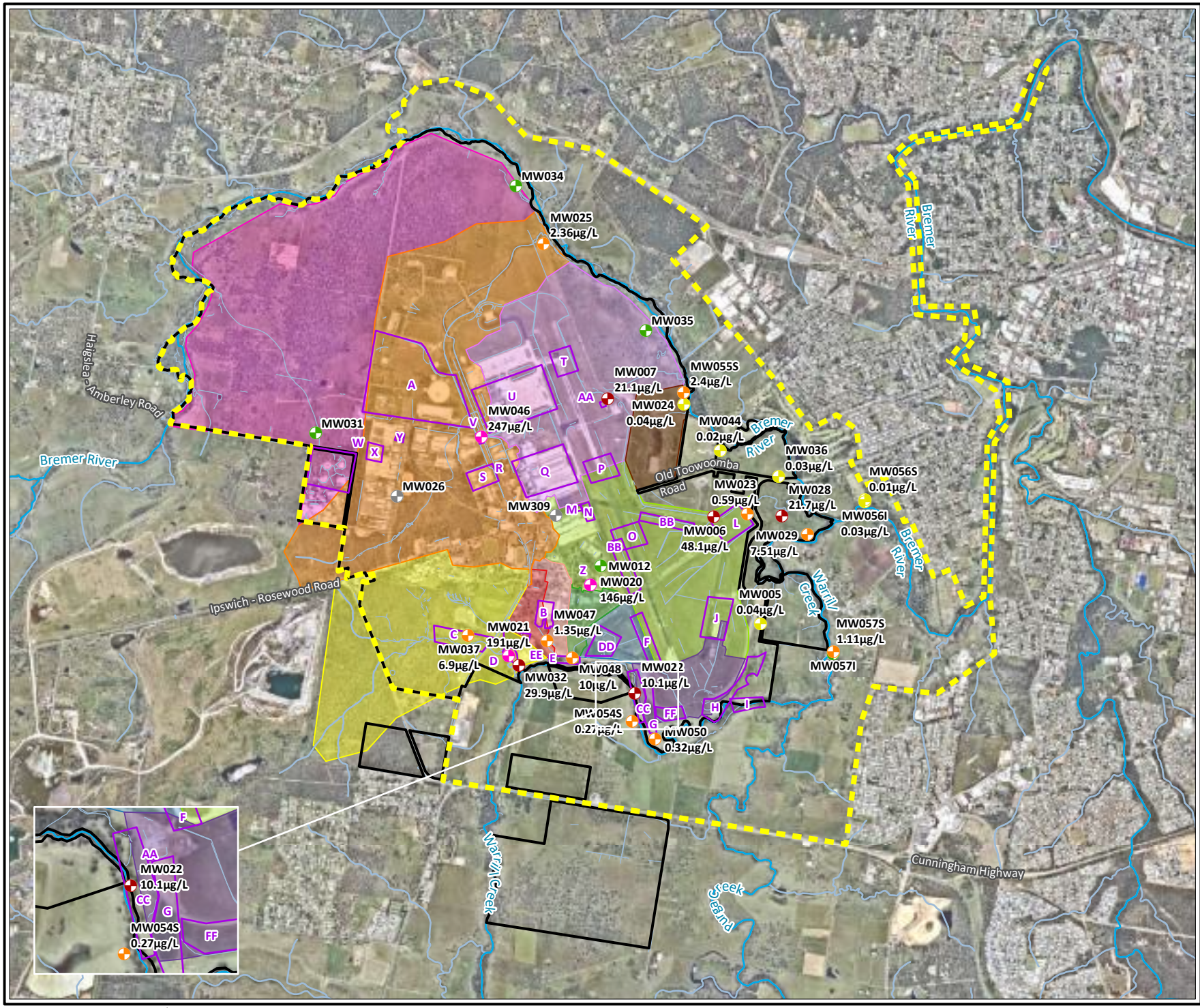
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

GROUNDWATER ELEVATIONS, WALLOON COAL MEASURES (APRIL, 2024)

FIGURE 10D

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_10D_GWContWalloonApr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

Sum of PFHxS & PFOS Concentration

- >50 µg/L
- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect
- Not Sampled

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

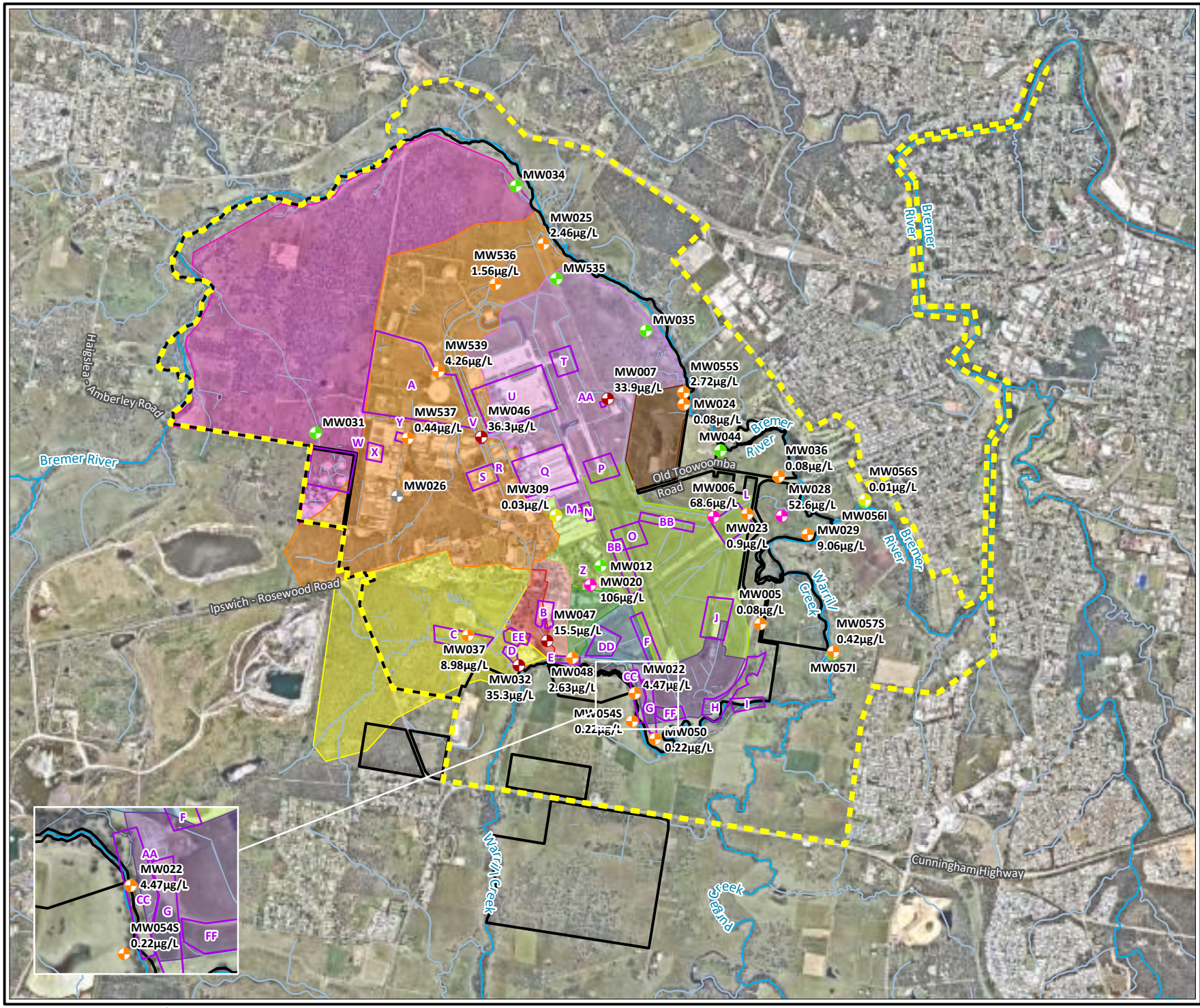
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS GROUNDWATER CONCENTRATIONS, ALLUVIUM / TERTIARY FORMATION (OCTOBER, 2023)

FIGURE 11A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_11A_PFHxSPFOSAlluTertOct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

Sum of PFHxS & PFOS Concentration

- >50 µg/L
- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect
- Not Sampled

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

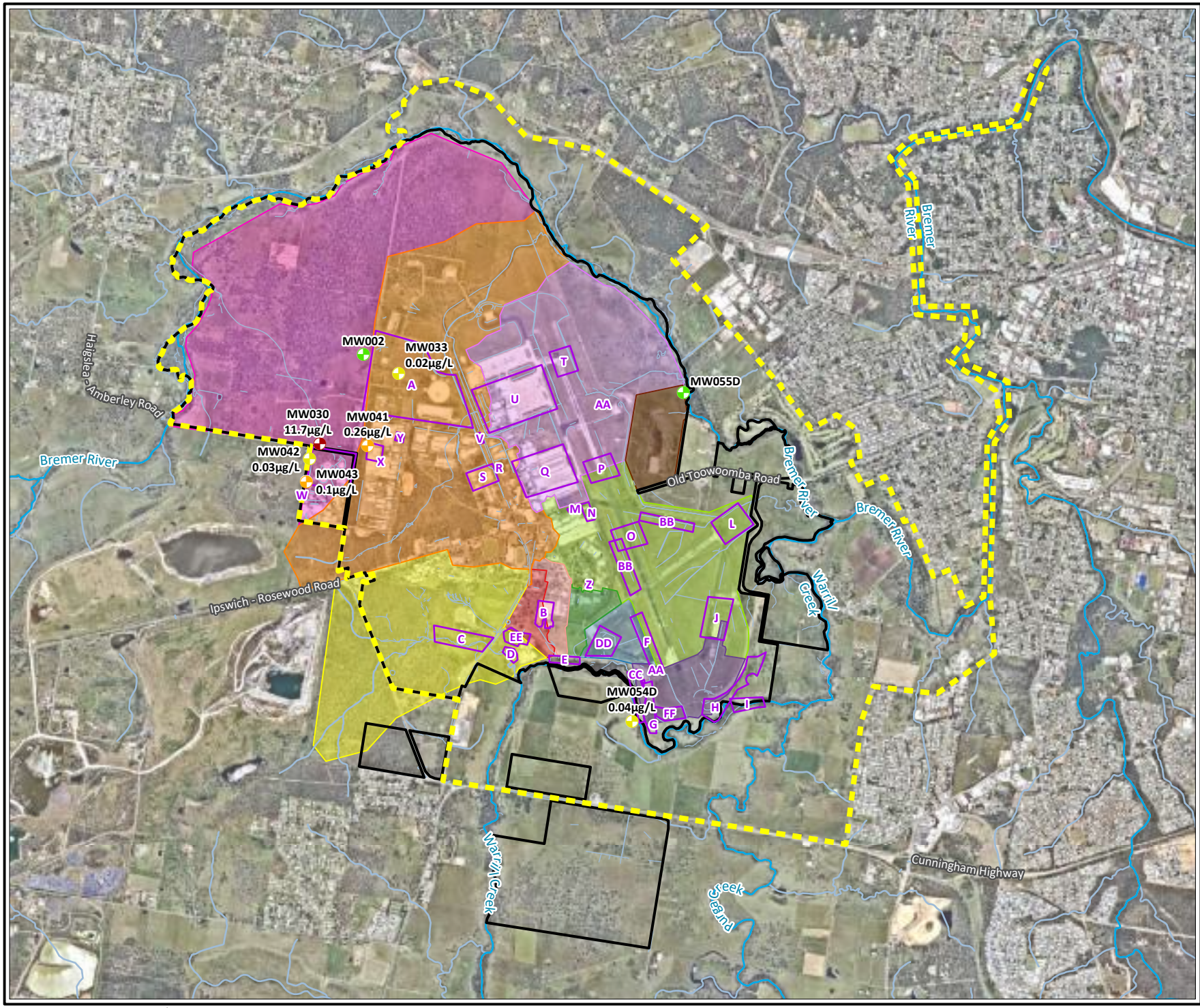
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS GROUNDWATER CONCENTRATIONS, ALLUVIUM / TERTIARY FORMATION (APRIL, 2024)

FIGURE 11B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_11B_PFHxSPFOSAlluTertApr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

Sum of PFHxS & PFOS Concentration

- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

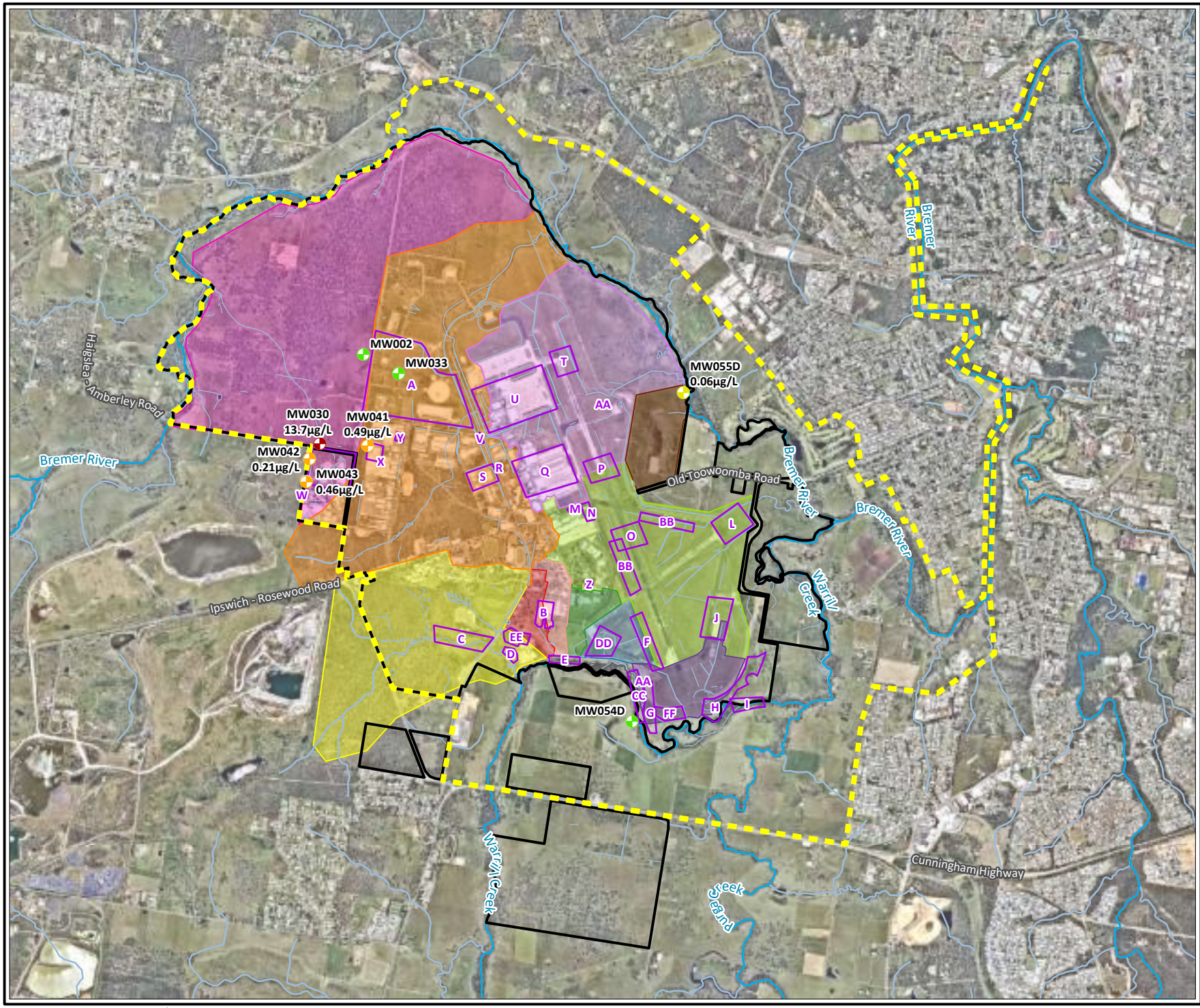
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS GROUNDWATER CONCENTRATIONS. WALLOON COAL MEASURES (OCTOBER, 2023)

FIGURE 11C

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_11C_PFHxSPFOSWalloonOct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

Sum of PFHxS & PFOS Concentration

- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

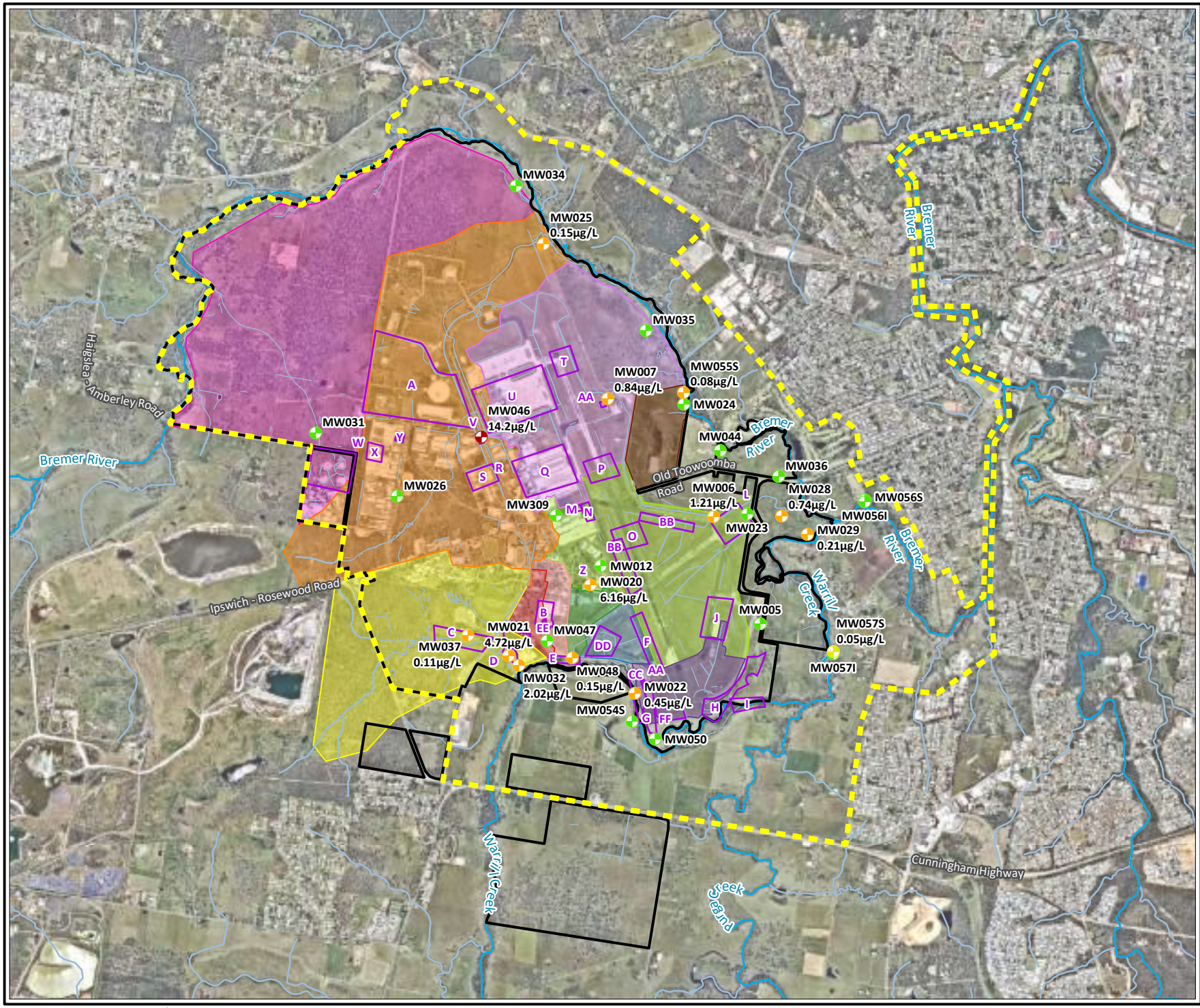
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS GROUNDWATER CONCENTRATIONS, WALLOON COAL MEASURES (APRIL, 2024)

FIGURE 11D

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_11D_PFHxSPFOSWalloonApr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

PFOA Concentration

- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

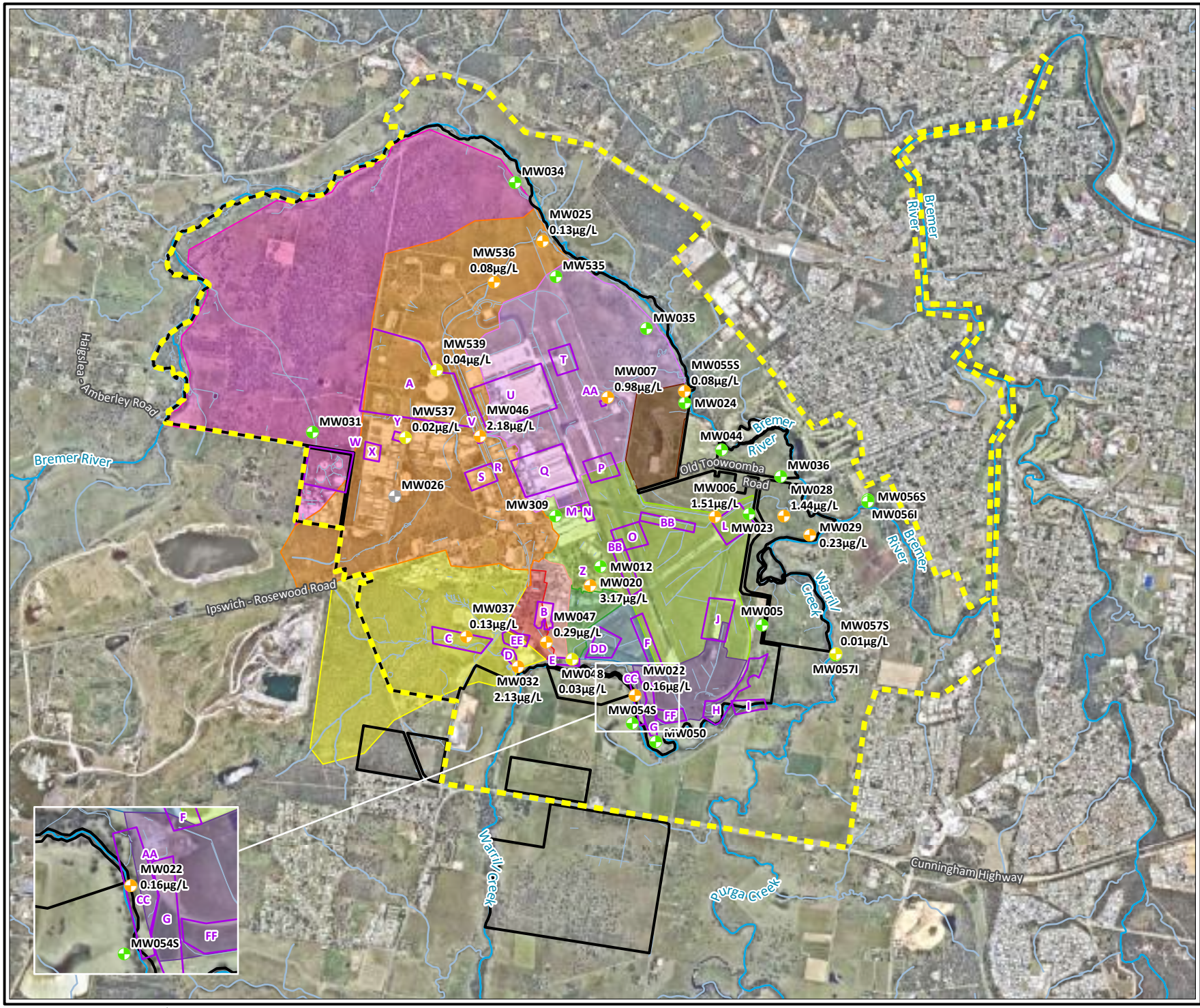
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA GROUNDWATER CONCENTRATIONS, ALLUVIUM / TERTIARY FORMATION (OCTOBER, 2023)

FIGURE 12A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_12A_PFOAAlluTertOct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

PFOA Concentration

- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect
- Not Sampled

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:47,479

0 500 1,000
metres

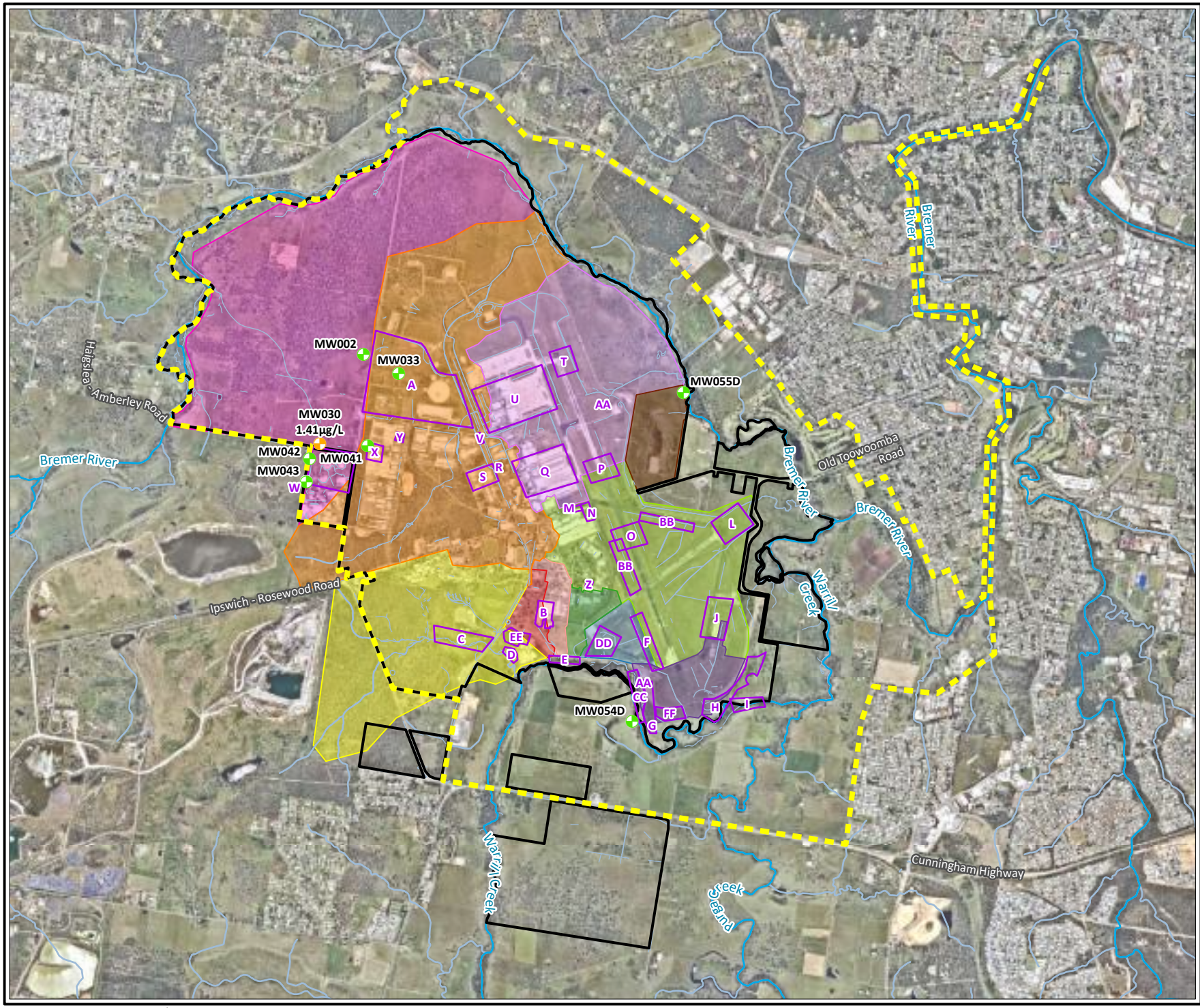
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA GROUNDWATER CONCENTRATIONS, ALLUVIUM / TERTIARY FORMATION (APRIL, 2024)

FIGURE 12B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_12B_PFOAAlluTertApr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

PFOA Concentration

- 0.07 - 10 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000

metres

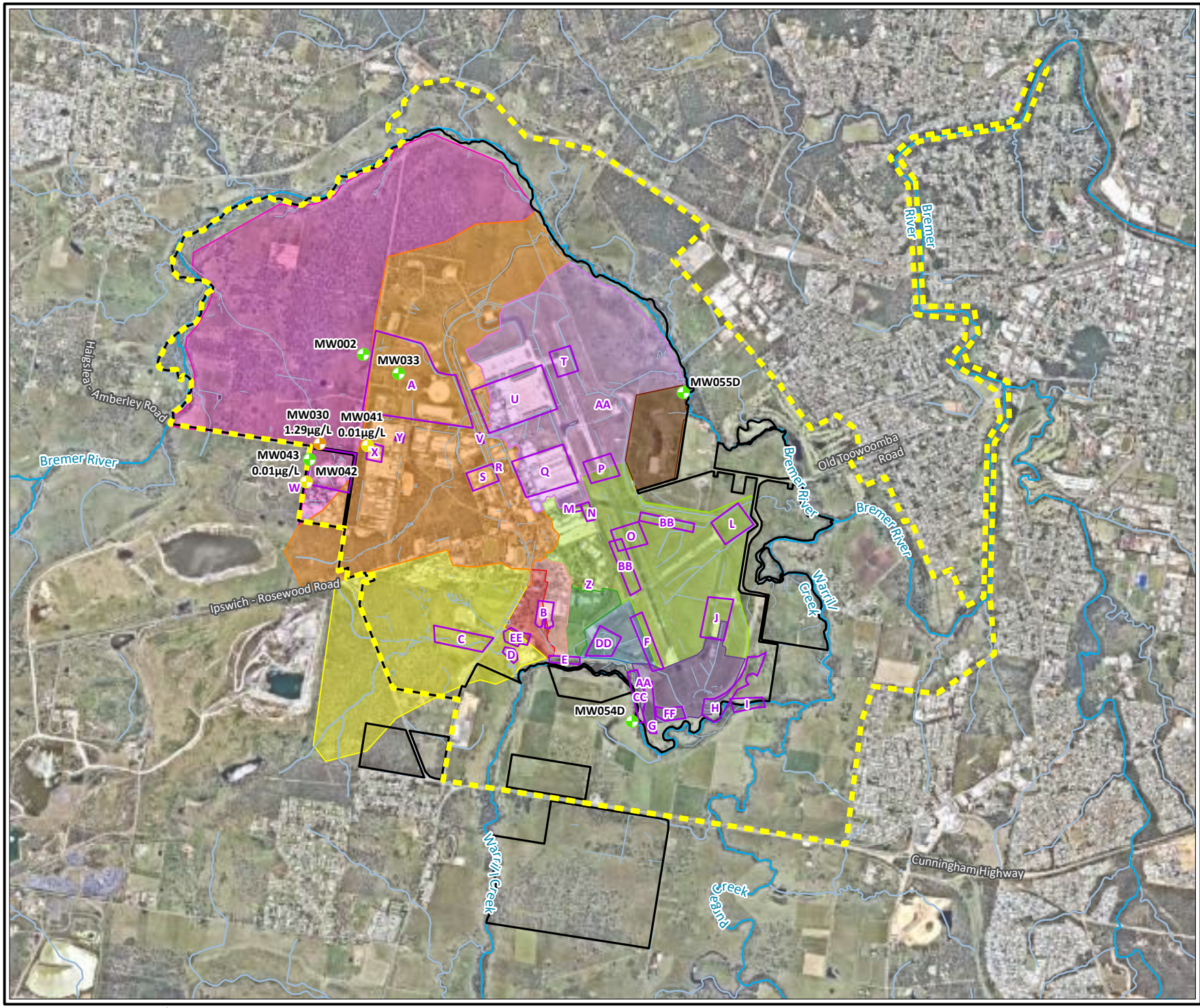
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA GROUNDWATER CONCENTRATIONS, WALLOON COAL MEASURES (OCTOBER, 2023)

FIGURE 12C

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_12C_PFOAWalloonOct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Groundwater Monitoring Location

PFOA Concentration

- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:48,000

0 500 1,000
metres

Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA GROUNDWATER CONCENTRATIONS, WALLOON COAL MEASURES (APRIL, 2024)

FIGURE 12D

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_12D_PFOAWalloonApr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024

7.3 Surface Water

7.3.1 Surface Water Physiochemical Parameters

Surface water quality field parameters recorded during collection of surface water samples following stabilisation of parameters have been presented in **Table A3**, **Appendix A**. A summary of results has been presented in **Table 7-6**.

Table 7-6: Summary of Surface Water Quality Parameters

Water Body	Event	DO (mg/L)	EC (µs/cm)	pH	ORP (mV)	Temp
Bremer River	Oct/Nov 2023	1.84 (SW094) – 6.07 (SW045) *Aerobic conditions*	601 (SW051) – 2,195 (SW090) *Fresh to brackish*	7.33 (SW050) – 8.42 (SW025) *Near neutral*	94.5 (SW051) – 304.1 (SW089) *Mildly to moderately reducing*	23.1 (SW051) – 29.9 (SW090)
	Apr/May 2024	1.98 (SW051) – 7.01 (SW091) *Aerobic conditions*	310.2 (SW090) – 1,521 (SW091) *Fresh to brackish*	6.51 (SW091) – 7.23 (SW045) *Near neutral*	174 (SW036) – 402.2 (SW088) *Mildly to moderately reducing*	16.9 (SW091) – 25.5 (SW025)
Warrill Creek	Oct/Nov 2023	2.61 (SW034) – 9.36 (SW099) *Aerobic conditions*	6.5 (SW018I) – 829 (SW026) *Fresh*	7.29 (SW015) – 8.03 (SW026) *Near neutral*	252.9 (SW026) – 329.1 (SW005) *Mildly to moderately reducing*	23.6 (SW009) – 29.8 (SW026)
	Apr/May 2024	1.21 (SW099) – 5.44 (SW009) *Aerobic conditions*	315.2 (SW004) – 702 (SW099) *Fresh*	7.22 (SW015) – 7.93 (SW020I) *Near neutral*	199.3 (SW026) – 259.1 (SW005) *Mildly to moderately reducing*	21.2 (SW099) – 26.9 (SW015)
On-base Drains	Oct/Nov 2023	1.51 (SW067) – 9.97 (SW030) *Aerobic conditions*	145.3 (SW079) – 1824 (SW049) *Fresh to brackish*	6.06 (SW003) – 10.61 (SW011) *Near neutral to alkaline*	187 (SW030) – 413.9 (SW003) *Mildly to moderately reducing*	20 (SW037) – 32.9 (SW033)
	Apr/May 2024	0.56 (SW064) – 8.01 (SW028) *Anaerobic to aerobic conditions*	71.6 (SW008)– 666 (SW053) *Fresh*	6.26 (SW049) – 8.75 (SW003) *Near neutral*	155.9 (SW064)– 305.6 (SW028) *Mildly to moderately reducing*	20.6 (SW021) – 27 (SW076)

In summary, surface water parameters recorded over the monitoring period indicate the following:

- Bremer River – characterised by near neutral, fresh to brackish, aerobic conditions and mildly to moderately reducing conditions. A biosheen was reported to be observed at surface water locations SW025, SW045, SW089 and SW094 in one or more monitoring round. It is noted that the higher EC levels were detected in the upstream portions of the catchment and may be related to localised geological conditions.
- Warrill Creek – characterised by near neutral, fresh, aerobic conditions and mildly to moderately reducing conditions. A biosheen was reported to be observed at surface water locations SW026 and SW034 in October 2023; and
- On-base Drains – characterised by near neutral to slightly alkaline, anerobic to aerobic conditions, mildly to moderately reducing conditions. Sampling observations comprised the following:
    - Slight sheen observed at SW002 in October 2023 and April 2024;
    - Biosheen observed at SW011, SW027, SW028, SW037, SW041, SW049 and SW079 in one or more monitoring event. It is noted that SW049 was reported to have a yellow green colour in October 2023, with higher electrical conductivity readings reported; and
    - Oil sheen observed at SW030 in October 2023.

7.3.2 Surface Water Analytical Results

Surface water analytical results are presented in **Tabel A4**, **Appendix A**. A Summary of the analytical results has been provided in **Table 7-7** and illustrated on **Figure 13 A-B** and **Figure 14 A-B**. An interpretive assessment of data has been provided in **Section 0.**

Deviations from the historical surface water data set has been summarised in the **Table 7-8**.

Table 7-7: Summary of PFAS Concentrations in Surface Water

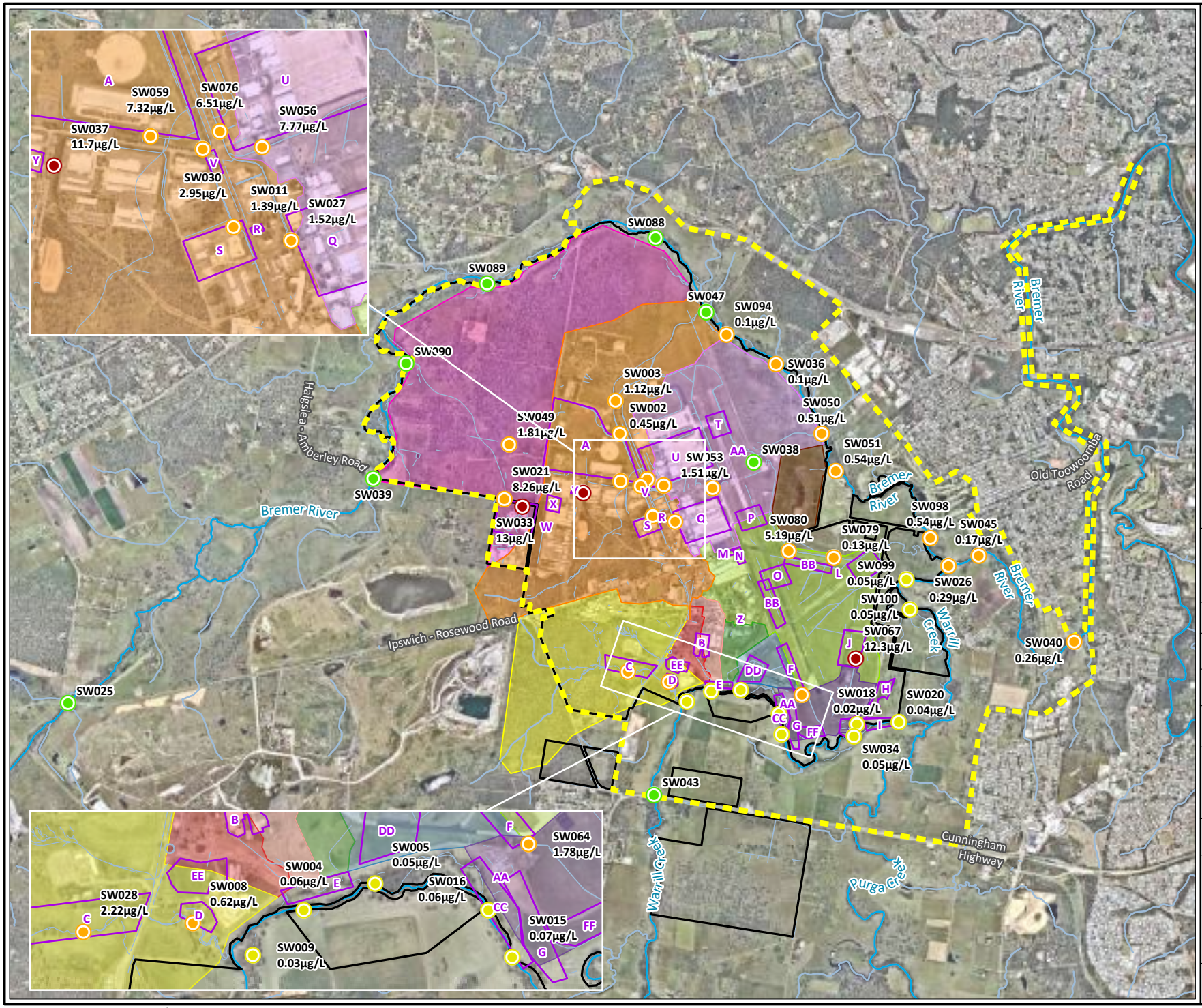
Compound	Sample Event	No. Samples (n)	Concentration Range (µg/L)	No. Sample with Conc. >LOR	No. Samples with Conc. > Drinking Water Criteria	No. Samples with Conc. > Recreational Use Criteria	No. Samples with Conc. > 99% Species Protection Criteria	No. Samples with Conc. > 95% Species Protection Criteria
PFOA	Oct/Nov 2023	46	<0.01 – 1.43	22	2	0	0	0
	Apr/May 2024	57	<0.01 – 1.26	18	2	0	0	0
PFOS	Oct/Nov 2023	46	<0.01 – 8.13	38	NA	NA	38	24
	Apr/May 2024	57	<0.01 – 27.8	34	NA	NA	34	19
PFHxS+PFOS	Oct/Nov 2023	46	<0.01 – 13.0	38	28	11	NA	NA
	Apr/May 2024	57	<0.01 – 52.6	33	18	13	NA	NA

Note: No. Samples includes Quality assurance samples, NA = Not Applicable

Table 7-8: Summary of Deviation from Historical Surface Water Data

Aspect	PFOA (µg/L / % increase or decrease from previous minimum/maximum)	PFOS (µg/L / % increase or decrease from previous minimum/maximum)	PFHxS+PFOS (µg/L / % increase or decrease from previous minimum/maximum)
October / November 2023			
First-time Detection (µg/L)	None	None	None
First-time Ecological Criteria Exceedance	None	None	None
First-time Human Health Exceedance	None	None	**SW028 (2.22 µg/L)**
New Historical Minimum	None	None	None
New Historical Maximum	SW028 (0.05 µg/L / 25%) SW056 (0.48 µg/L / 11.6%)	SW028 (0.94 µg/L / 23.7%) SW056 (4.43 µg/L / 12.2%)	**SW028 (2.22 µg/L / 41.4%)** **SW056 (7.77 µg/L / 34.6%)**
April / May 2024			
First-time Detection (µg/L)	None	None	None
First-time Ecological Criteria Exceedance	None	None	None
First-time Human Health Exceedance	None	None	None
New Historical Minimum	SW021 (0.28 µg/L / -33.3%)	**SW040 (0.01 µg/L / -83.3%)** **SW045 (0.01 µg/L / -75%)**	SW021 (8.08 µg/L /-2.2%) **SW028 (0.02 µg/L /-50%)** **SW040 (0.01 µg/L / -88.9%)** **SW045 (0.01 µg/L / -85.7%)** SW100 (<0.01)
New Historical Maximum	None	SW064 (1.44 µg/L / 0.7%)	SW008 (4.19 µg/L / 20.7%)

Note: **Bold** text indicates an exceedance of the acceptable level of error (+/- 30%, refer **Section 7.1**).



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Surface Water Location

Sum of PFHxS & PFOS Concentration

- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

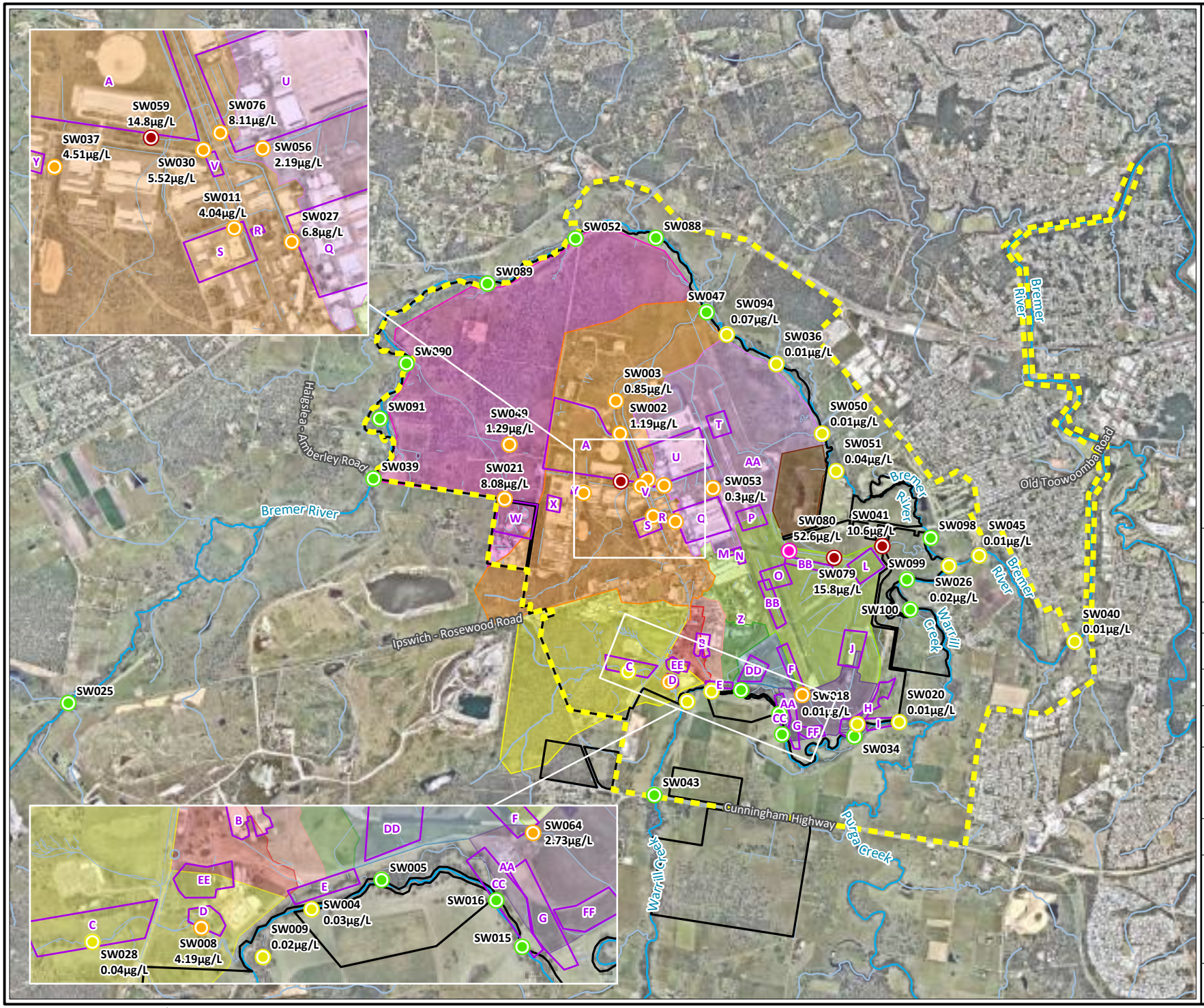
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS CONCENTRATIONS, SURFACE WATER (OCTOBER, 2023)

FIGURE 13A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_13A_PFHxSPFOS_SW_Oct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Surface Water Location

Sum of PFHxS & PFOS Concentration

- >50 µg/L
- 10 - 50 µg/L
- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

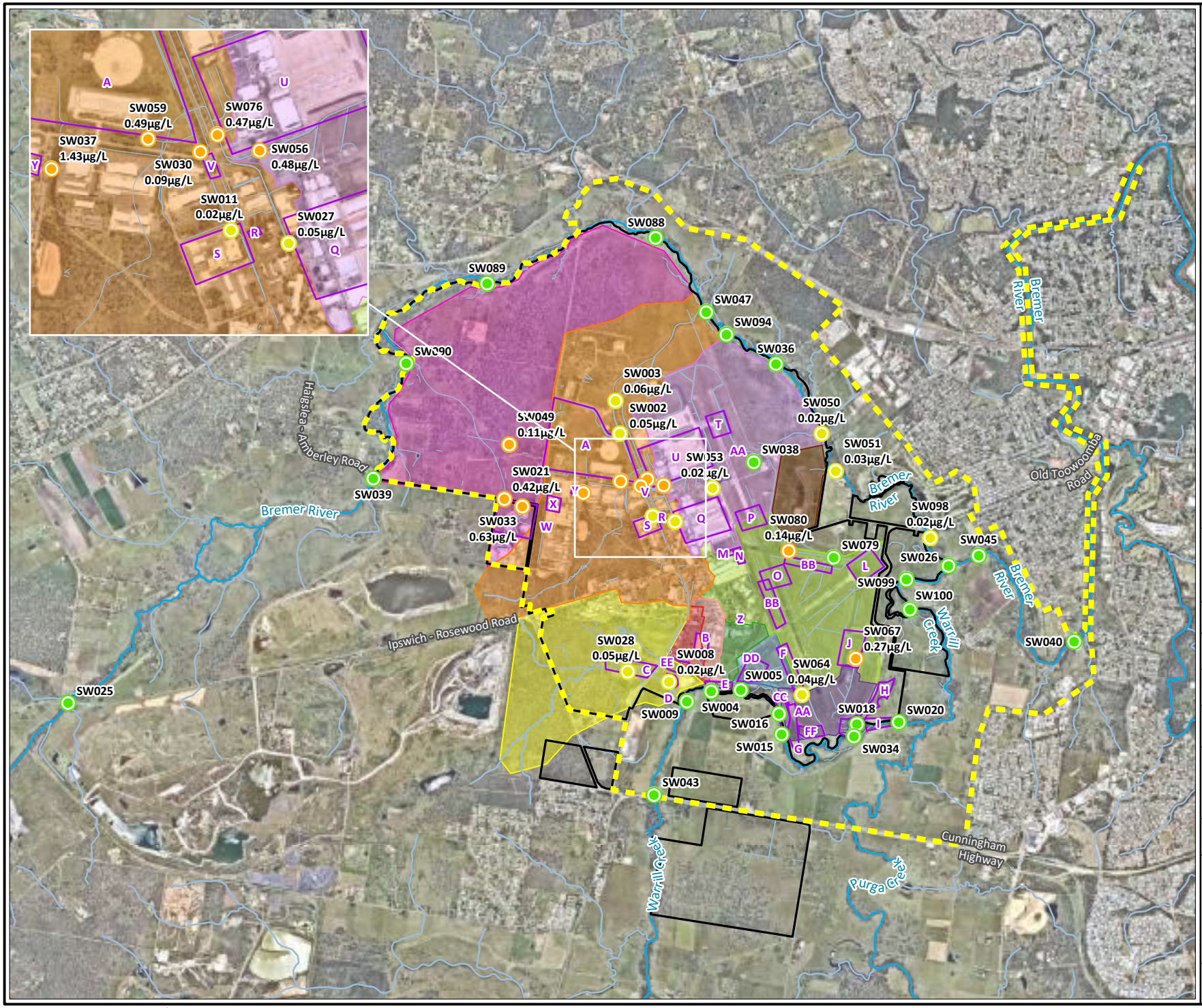
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS CONCENTRATIONS, SURFACE WATER (APRIL, 2024)

FIGURE 13B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_13B_PFHxSPFOS_SW_Apr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Surface Water Location

Concentration PFOA

- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

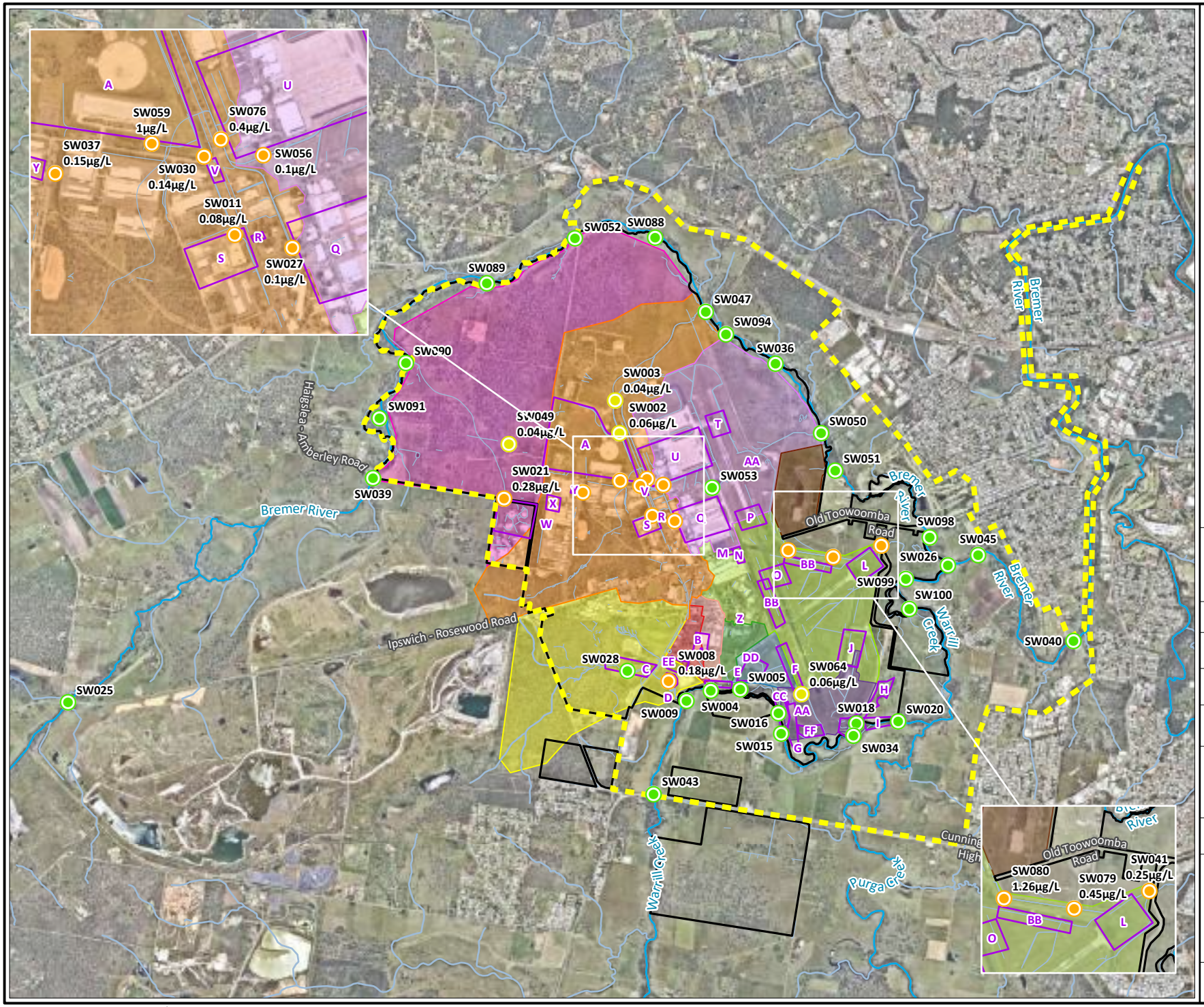
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA CONCENTRATIONS, SURFACE WATER (OCTOBER, 2023)

FIGURE 14A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_14A_PFOA_SW_Oct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Surface Water Location

PFOA Concentration

- 0.07 - 10 µg/L
- <0.07 µg/L
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA CONCENTRATIONS, SURFACE WATER (APRIL, 2024)

FIGURE 14B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_14B_PFOA_SW_Apr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024

7.4 Sediment

7.4.1 Sediment Field Observations

Field observations made during the collection of sediment samples have been provided in **Table A5**, in **Appendix A**. The sediment samples were typically noted to comprise light to dark brown or light grey to grey silt, sand or clay of varying silty/sandy textures. Organic inclusions in the form of rootlets, algae and/or leaves were also noted.

7.4.2 Sediment Analytical Results

Analytical results for the co-located sediment samples are presented in Tabel A6, **Appendix A**. A Summary of the analytical results and deviation from the historical sediment data has been provided in **Table 7-9.** Results have been illustrated on **Figure 15 A-B** and **Figure 16 A-B**, and an interpretive assessment of data has been provided in **Section 0**.

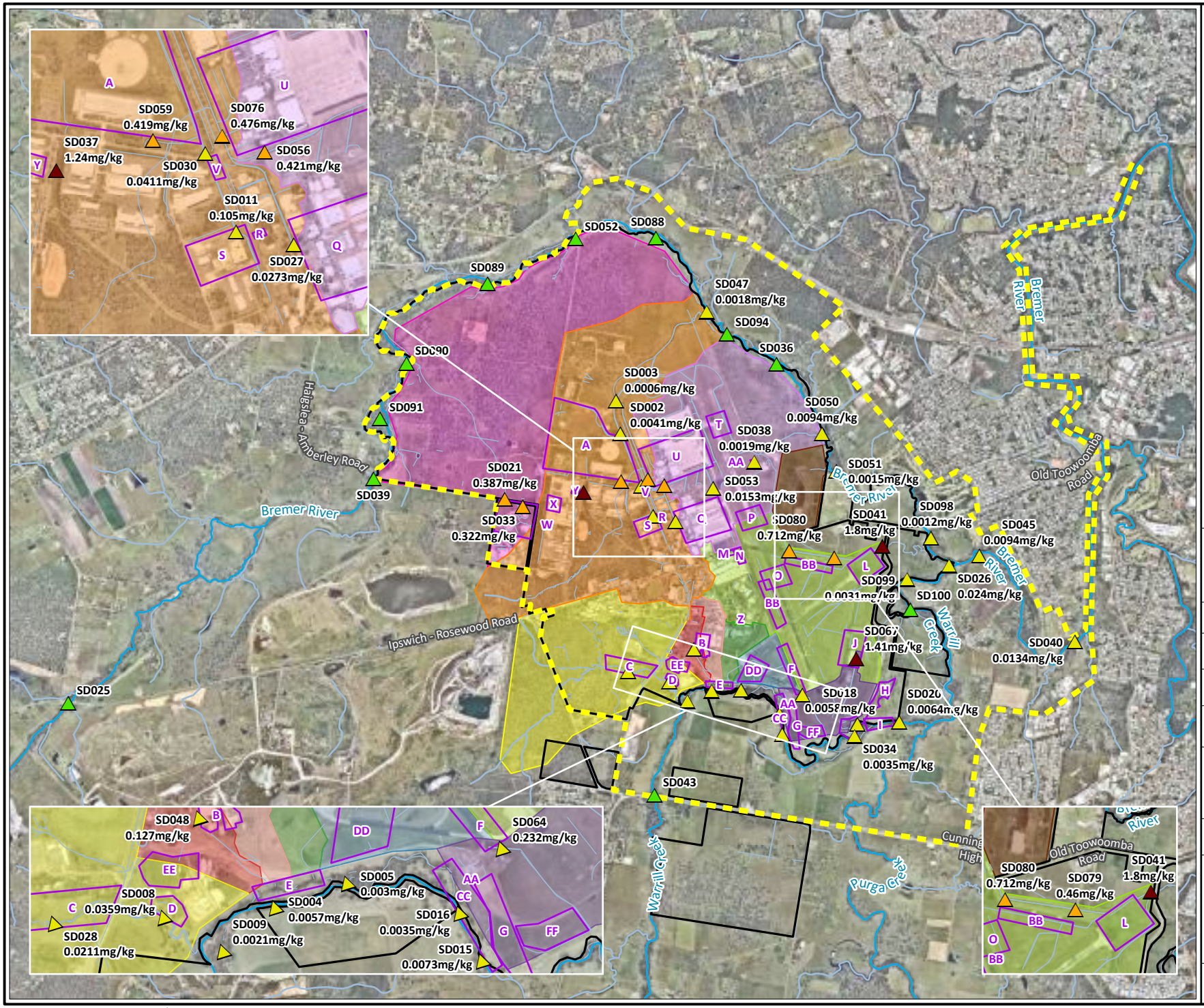
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Table 7-9: Summmary of PFAS Concentration in Sediment and Deviation from Historical Results

Compound	Sample event	No. of Samples	Concentration Range (mg/kg)	No. Sample with Conc. >LOR	First-time Detection (mg/kg)	New Historical Maximum (mg/kg)
PFOA	Oct/Nov 23	58	<0.0002 – 0.0307	14	None	**SD076 (0.0067 mg/kg / 123.3%)**
	Apr/May 24	60	<0.0002 – 0.0087	18	None	**SD004 (0.0005 mg/kg / 66.6%)** **SD053 (0.012 mg/kg 71.4%)**
PFOS	Oct/Nov 23	58	<0.0002 – 1.55	38	None	SD037 (1.06 mg/kg / 1.9%) **SD040 (0.013 mg/kg / 195.5%)** SD045 (0.009 mg/kg / 9.8%) **SD076 (0.428 mg/kg / 265.8%)**
	Apr/May 24	60	<0.0002 – 1.68	40	None	S**D004 (0.0283 mg/kg / 66.5%)**
PFHxS + PFOS	Oct/Nov 23	53	<0.0002 – 1.80	38	None	**SD040 (0.0134 mg/kg / 185.1%)** SD045 (0.0094 mg/kg / 11.9%) **SD076 (0.476 mg/kg / 287%)**
	Apr/May 24	54	<0.0002 – 1.82	37	None	**SD004 (0.0289 mg/kg / 66.1%)**

Note: No. Samples includes Quality assurance samples, NA = Not Applicable, **Bold** text indicates an exceedance of the acceptable level of error (+/- 30%, refer **Section 7.1**).

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Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Sediment Sample Location

Sum of PFHxS & PFOS Concentration

- 1 - 10 mg/kg
- 0.3 - 1 mg/kg
- <0.3 mg/kg
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

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Scale 1:55,000

0 500 1,000
metres

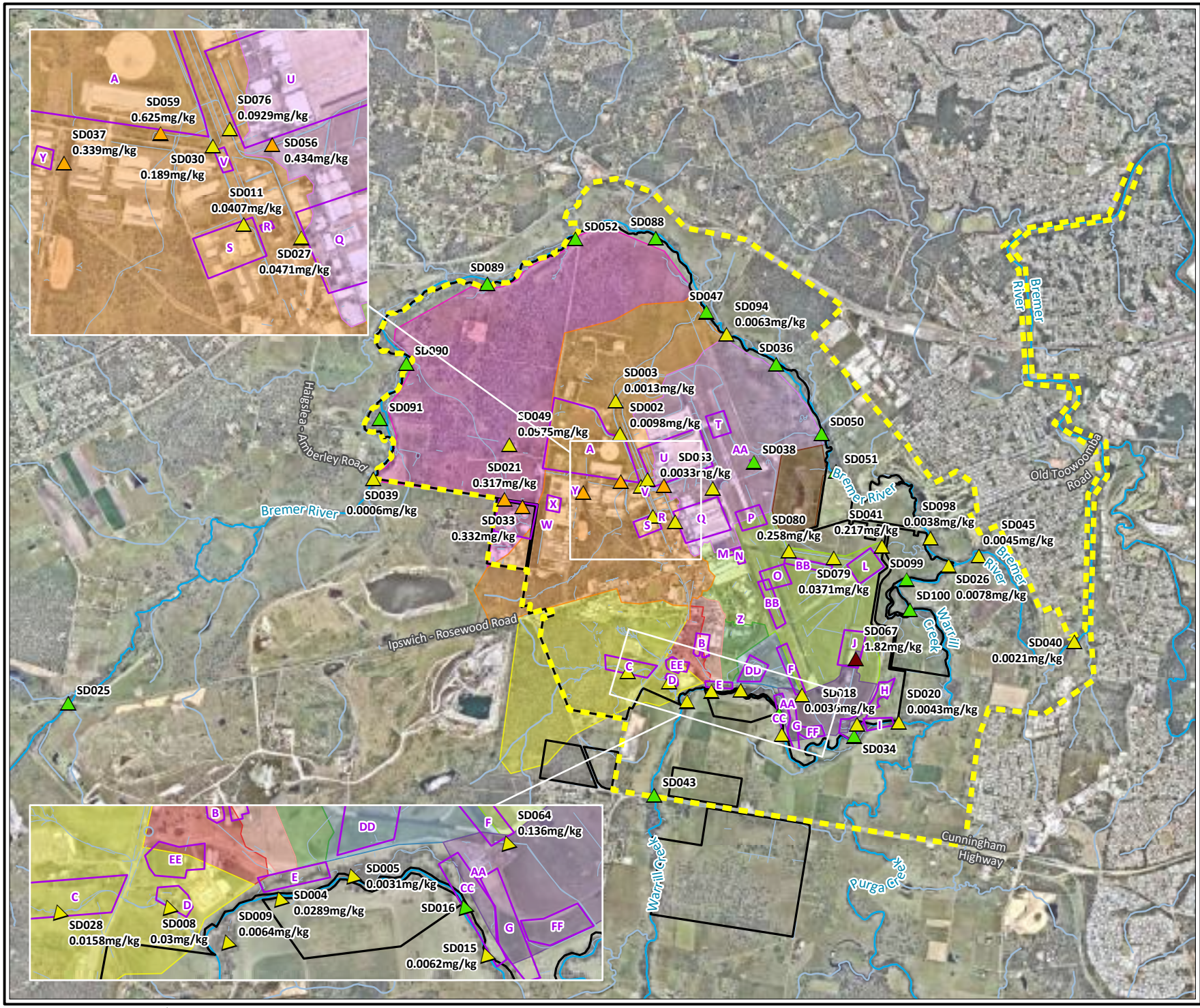
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS CONCENTRATIONS, SEDIMENT (OCTOBER, 2023)

FIGURE 15A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_15A_PFHxSPFOS_SD_Oct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Sediment Sample Location

Sum of PFHxS & PFOS Concentration

- 1 - 10 mg/kg
- 0.3 - 1 mg/kg
- <0.3 mg/kg
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

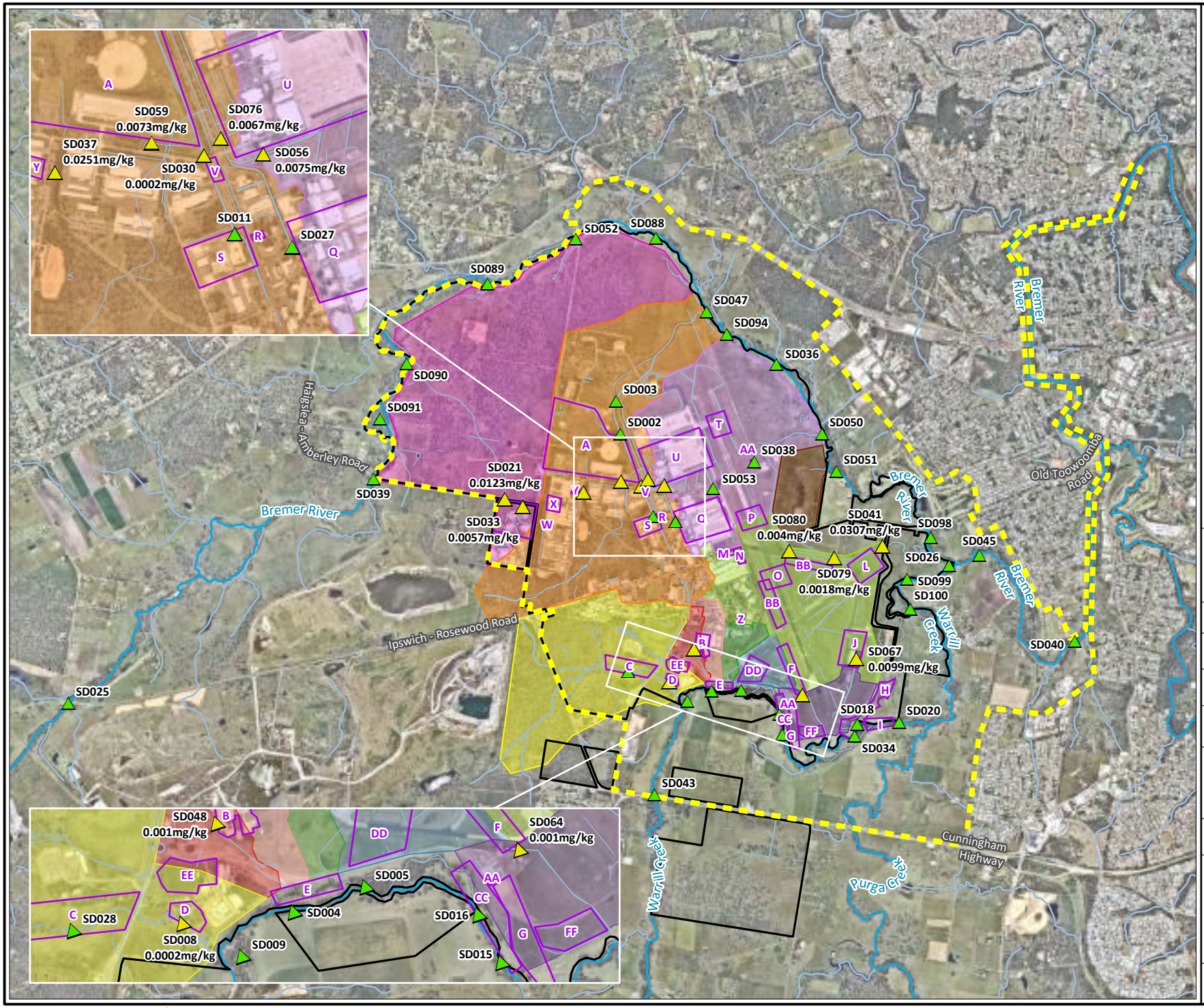
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

SUM OF PFHxS + PFOS CONCENTRATIONS, SEDIMENT (APRIL, 2024)

FIGURE 15B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_15B_PFHxSPFOS_SD_Apr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Sediment Sample Location

PFOA Concentration

- <0.3 mg/kg
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

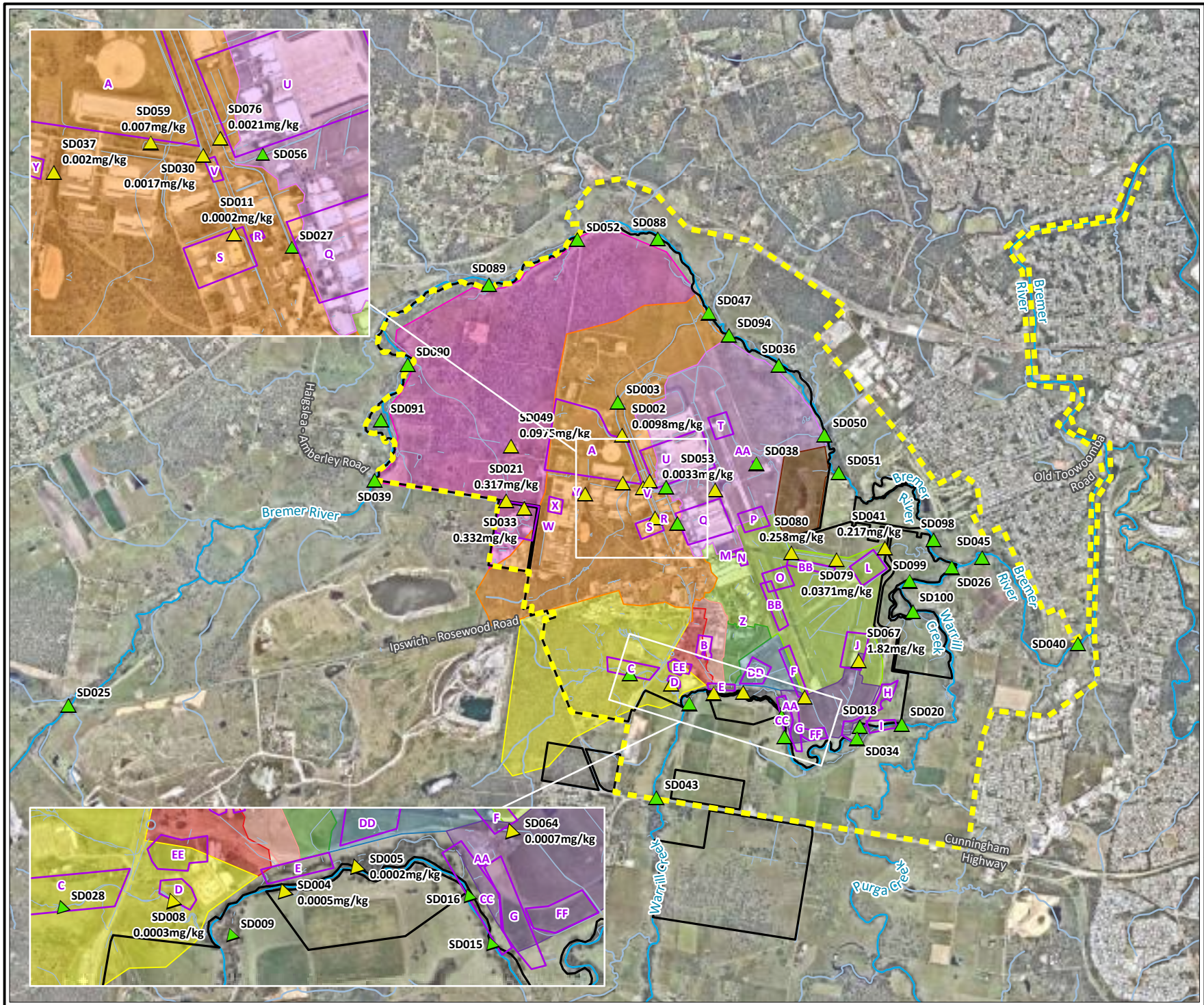
Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA CONCENTRATIONS, SEDIMENT (OCTOBER, 2023)

FIGURE 16A

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_16A_PFOA_SD_Oct23
Reference: www.nearmap.com - Imagery Date: 03/06/2024



Legend

- Watercourse of Interest
- Watercourse / Drainage Line
- PFAS Management Area Plan Boundary
- Confirmed Primary Source Area
- RAAF Amberley Approximate Site Boundary

Sediment Sample Location

PFOA Concentration

- <0.3mg/kg
- Non-detect

Catchment Areas

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- Catchment 5
- Catchment 6
- Catchment 7
- Catchment 8
- Catchment 9
- Catchment 10
- Catchment 11

JBS&G

Job No: 66133

Client: Department of Defence

Version: v7 | Date: 04-Dec-2024

Scale 1:55,000

0 500 1,000
metres

Coord. Sys. GDA2020 MGA Zone 56

RAAF Base Amberley, Queensland

PFOA CONCENTRATION, SEDIMENT (APRIL, 2024)

FIGURE 16B

Name: 66133_RAAF_Amberley_OMR24_v7/ 66133_16B_PFOA_SD_Apr24
Reference: www.nearmap.com - Imagery Date: 03/06/2024

8. Interpretive Analysis

8.1 General

The data obtained during the 2023-2024 OMR period has been interpreted in consideration of the 2023 mass flux study (Senversa, 2023). As such, Sum PFAS concentrations have been focused upon for consistency with the 2023 mass flux study, noting that there is no Commonwealth criteria for Sum PFAS. Consideration has also been given to PFOS, PFHxS and PFOA as the PFAS compounds with Commonwealth criteria (where available).

Relevant surface water, sediment and groundwater sampling locations have been assigned to one of the 11 surface water catchments as appropriate. For some areas, there is land between the outer boundaries of the 11 surface water catchments and either Bremer River, Warrill Creek and/or the perimeter fence of the Base. Relevant surface water, sediment and groundwater sampling locations for these areas have been assigned to either Bremer River or Warrill Creek for the purposes of data interpretation.

For Relevant surface water and sediment sampling locations undertaken directly from the Bremer River or Warrill Creek, these have been assigned to either Bremer River or Warrill Creek for the purposes of data interpretation.

The assessment of surface water concentration trends is more difficult than groundwater concentration trends given the seasonal factors which influence surface water concentrations (i.e. dilution following heavy rainfall, evapoconcentration during dry periods). One means of assessing this uncertainty is to differentiate the time series data by season and conduct trend assessments for different seasons (e.g. wet vs dry). At least 8-10 measurements are recommended for the purposes of assessing trends[6]. The current data set:

- Meets the 8-10 measurement requirements when considering the data as a whole.;
- Predominantly does not meet the 8-10 measurement requirements if the data was to be split by season in order to prepare seasonal Mann Kendall trends.

Mann-Kendall trend assessments completed for the groundwater and surface water data sets as a whole have been provided in **Appendix E.** It is recommended that seasonal Mann Kendall trends are considered for the 2025/2026 OMR. It is anticipated that by this time, the majority of monitoring wells will have sufficient data.

8.2 Groundwater Elevation and Flow

The inferred groundwater flow direction in the Alluvium-Tertiary Formation is consistent with previous reports, with groundwater flowing from the topographical high in the western portion of the Base where the Tertiary Formation is the upper aquifer material to the lower areas in the northeast, east and southeast where the Alluvium forms the upper portion of the aquifer. The Walloon Coal Measures is a complex system characterised by high (fractures and bedding planes) and low (rock mass) hydraulic conductivity zones which is recharged by leakage from upper formations. It is anticipated that groundwater flow in the Walloon Coal Measures is predominantly east towards the Bremer River and Warrill Creek confluence.

As noted earlier, at the time of this draft report JBS&G is in the process of organising for survey of Warrill Creek and Bremer River to further assess the gaining/losing characteristics of these water ways. A comparison of topographic contours (QLD Globe) and relative levels for groundwater indicates that:

- Bremer River:
    - Relative levels for groundwater appear to be higher than the base of Bremer River in areas north of the base (e.g. MW034, MW025);

[6] State of Queensland (2021) Using Monitoring data to assess groundwater quality and potential environmental harm, Version 2.

- Relative levels for groundwater appear to be both lower and higher than the base of the Bremer River in areas east of the base (e.g. MW056L, MW056S).

- Warrill Creek:
  - Relative levels for groundwater appear to be higher than the base of Bremer River west of the Airside portion of the base (e.g. west of MW050);
  - Relative levels for groundwater appear to be both lower and higher than the base of the Warrill Creek in areas south east of the Airside portion of the base (e.g. MW057S, MW057I).

Relative levels for groundwater being higher than the base of the Bremer River support the existing groundwater monitoring network (i.e. between base and river) when coupled with ongoing surface water monitoring. Relative levels for groundwater being lower than the base of the Bremer River may require consideration of monitoring network adequacy on the One Mile side of the Bremer River noting that the topography in this area suggests groundwater flow would be towards Bremer River. It is noted that the current monitoring network only has two wells on the One Mile side of the Bremer River (MW056L, MW056S) and recent results for these wells show limited evidence of elevated PFAS (PFOS less than 0.02µg/L).

Relative levels for groundwater being higher than the base of the Warrill Creek support the existing groundwater monitoring network (i.e. between base and creek) when coupled with ongoing surface water monitoring. Relative levels for groundwater being lower than the base of the Warrill Creek may require consideration of monitoring network adequacy on the Purga and Yamanto side of Warrill Creek. The current monitoring network only has two wells on the Purga / Yamanto side of Warrill Creek (MW057S, MW057I) and recent results for these wells show evidence of elevated PFAS (PFOS less than 0.35µg/L).

8.3 Catchment Based Groundwater, Surface Water and Sediment

8.3.1 Catchment 1

8.3.1.1 Groundwater

Groundwater data collected from Catchment 1 as part of the Ongoing Monitoring Program has been summarised in **Table 8-1**. In relation to the spatial trends, concentrations of PFAS are noted to be greater within the vicinity of the relevant CPSAs, with exception of MW030. Monitoring well MW030 reported the highest concentration of PFAS in this catchment and is located downgradient of CPSA W, adjacent to on-Base stormwater drain which receives discharge from CPSA W. Historical sum of PFAS concentrations from surface water sample location SW021, located within the stormwater drain ranged between 10.2 – 84.6 µg/L.

The groundwater well located at the permitter of the catchment and the Bremer River (MW034) did not report detectable concentrations of PFAS. It is noted that monitoring well is more representative of Catchment 7, as opposed to Catchment 1. There are no wells between the CPSA W boundary wells (MW043 and MW042) and the Bremer River (1.4km to river) despite a potential north-west groundwater flow direction within this portion of the base.

No trend, stable or decreasing trends for sum of PFAS was recorded for four out of six wells. Monitoring well MW030 reported new maximums for PFOS in October 2023 and an increasing trend with >99.9% confidence. The increase trend is considered to potentially be associated with ongoing infiltration of impacted surface water from the adjacent drainage line and/or increase in groundwater elevation (18.41 mAHD in April 2020 to 20.21 mAHD in April 2024) mobilising PFAS within the vadose zone. A probably increasing trend was reported for MW043 with 93.3% confidence. An increase in groundwater elevation was also reported for this well from October 2021 (17.55 mAHD) to April 2024 (19.32 mAHD). This trend should be confirmed over the 2024-2025 monitoring period. It is noted that the trend is not consistent with what may reasonably be expected if the increasing trend was related to a true change in the CPSA W source when considering that a PFAS treatment plant was established in this area during the monitoring period (see **Section 6.2.2**).

Table 8-1: Catchment 1 Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW043 (Walloon Coal Measures)	CPSA W	0.06 – 0.24	<0.01 – 0.01	0.1 – 0.46	0.15 – 0.82	Probably increasing (93%)
MW042 (Walloon Coal Measures)	CPSA W	0.02 – 0.15	<0.01	0.03 – 0.21	0.03 – 0.23	Stable (60.6%)
MW030 (Walloon Coal Measures)	CPSA W (downgradient)	0.23 – 0.41	1.29 – 1.41	11.7 – 13.7	32.5 – 39.9	Increasing (>99.9)
MW031 (Tertiary Formation)	CPSA W (downgradient)	<0.01	<0.01	<0.01	<0.01	Probably decreasing (94.3%)
MW002 (Walloon Coal Measures)	CPSA A (downgradient)	<0.01	<0.01	<0.01	<0.01 – 0.02	Probably decreasing (92.9%)
MW034 (Alluvium)	North east catchment 1	<0.01	<0.01	<0.01	<0.01	No Trend (61.7%)

8.3.1.2 Surface Water and Sediment

Surface water and sediment data collected from Catchment 1 as part of the Ongoing Monitoring Program represents a drainage line from within CPSA W leading to a dam within the Hansen Farm Conservation Area. The following table (**Table 8-2**) presents a summary of the data collected in order of upstream to downstream. PFAS concentrations detected are consistent with the conceptual understanding of PFAS in this area (i.e. PFAS migration from areas surrounding fire training area, reduction of PFAS concentrations with distance from primary source).

Trend assessment completed for sum of PFAS concentration have identified decreasing trends for SW021 (96.4%) and SW049 (97.0%). It is noted that there nearest sampling location to the Bremer River is >1.3km.

The significance of the concentrations detected in this catchment is considered in more detail when reviewing the off-Base data (see **Section 8.4**).

Table 8-2: Catchment 1 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW / SD033	CPSA W	8.13	0.63	13.0	20.4	0.291 – 0.305	0.0057 – 0.0087	0.322	0.385 – 1.14
SW / SD021	CPSA W	5.52 – 6.06	0.28 – 0.4 2	8.08 – 8.26	10.2 – 12.4	0.303 – 0.337	0.0028 – 0.0123	0.317 – 0.387	0.340 – 0.506
SW / SD049	Hansens Farm Dam	0.75 – 1.12	0.021 – 0.11	1.22 – 1.81	1.56- 2.78	0.069 – 0.0939	<0.0005 – 0.0005	0.0874 – 0.0975	0.0874 – 0.0983

8.3.2 Catchment 2

No groundwater or surface water data is collected from Catchment 2 as part of the Ongoing Monitoring Program . The 2023 mass flux study confirmed this to be appropriate as <1% of the PFAS mass flux migrates from this area. The significance of potential PFAS migration from this catchment is considered when reviewing the data for Warill Creek (see **Section 8.5**).

8.3.3 Catchment 3

8.3.3.1 Groundwater

Groundwater data collected from Catchment 3 as part of the Ongoing Monitoring Program has been summarised in **Table 8-3**. Concentrations of PFAS are noted to be greater within the vicinity of relevant CPSAs, however, are also noted to be higher at monitoring wells located adjacent to surface water drainage features. The highest concentrations of PFAS in this catchment were recorded at MW006 and MW020. Monitoring well MW020 is located within CPSA Z (Fuel UST with AFFF listing) and MW006 is located downgradient of several CPSAs (approximately 1 km downgradient of CPSA M/N) and is immediately adjacent to the major stormwater drain for Catchment 3. Historical sum of PFAS concentrations in surface water recorded at nearby location SW079 ranged between 0.05 – 72.2 µg/L. There are no groundwater wells located between CPSA M and CPSA N and MW006. As such, the there is uncertainty with respect to the extent of PFAS contamination in this area (i.e. whether there is a PFAS plume originating from CPSA M and CPSA N or whether the PFAS detected in MW006 is associated with vertical migration of stormwater from drainage lines).

No trend, stable or decreasing trends for sum of PFAS was recorded for three out of the five wells, with increasing trends identified for MW020 (within CPSA Z, Fuel UST with AFFF listing) and MW023 (immediately east of CPSA L, Potential Former Fire Training and Operations Testing Area). Monitoring well MW020 expresses seasonal variability, with concentrations typically higher post-wet season, however, the increasing trend reported is considered to be associated with the order magnitude increase in concentrations from April 2023.

Similarly, MW023 expresses seasonal variability with results reported within the historical range. The increasing trend should be assessed following the 2024-2025 monitoring period.

Table 8-3: Catchment 3 Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW309 (Tertiary Formation)	CPSA M (upgradient)	<0.01 – 0.03	<0.01	<0.01- 0.9	<0.01 – 1.28	Stable (70.3%)
MW006 (Alluvium)	CPSA M, N and BB (downgradient)	48.4	1.51	68.6	89.9	Probably decreasing (93.6%)
MW012 (Tertiary Formation)	CPSA BB (Upgradient)	<0.01	<0.01	<0.01	<0.01	No trend (74.5%)
MW020 (Tertiary Formation)	CPSA Z	79.0 – 97.7	3.17 – 6.16	106 – 146	132 – 194	Increasing (98.2%)
MW023 (Alluvium)	CPSA L (downgradient)	0.16	<0.01	0.90	1.28	Increasing (99.3%)

8.3.3.2 Surface Water and Sediment

Surface water and sediment data collected from Catchment 3 as part of the Ongoing Monitoring Program represents a north west to east drainage line receiving stormwater discharge from all CPSAs within Catchment 3. The following table (**Table 8-4**) presents a summary of the data collected in order of upstream to downstream. PFAS concentrations detected are consistent with the conceptual understanding of PFAS in this area (i.e. PFAS migration from source areas, reduction of PFAS concentrations with distance).

Trend assessment completed for sum of PFAS concentrations have identified probably decreasing trends for SW079 (92.2%) and SW041 (91.8%). The significance of the concentrations detected in this catchment is considered in more detail when reviewing the data collected for Bremer River and Warril Creek (see **Section 8.4** and **8.5**).

Table 8-4: Catchment 3 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW / SD080	CPSA M, CPSA N, CPSA Z, CPSA BB, CPSA O	3.45 – 27.58	0.14 – 1.26	5.19 – 52.6	6.62 – 68.4	0.222 – 0.669	0.004 – 0.0041	0.258 – 0.712	0.317 – 0.76
SW / SD079	CPSA M, CPSA N, CPSA Z, CPSA BB, CPSA O	0.08 – 7.47	<0.01 – 0.45	0.13 - 15.8	0.15 – 21.8	0.0296 – 0.438	0.0005 – 0.0018	0.0371 – 0.460	0.0407 – 0.482
SW / SD041	CPSA M, CPSA N, CPSA Z, CPSA BB, CPSA O	5.41	0.25	10.5	14.3	0.198 – 1.55	0.0054 – 0.307	0.217 – 1.8	0.244 – 1.98

8.3.4 Catchment 4

No groundwater or surface water data is collected from Catchment 4 as part of the Ongoing Monitoring Program . The 2023 mass flux study confirmed this to be appropriate as only 1.7% of the PFAS mass flux migrates from this area. The significance of potential PFAS migration from this catchment is considered when reviewing the data for Warill Creek (see **Section 8.5**).

8.3.5 Catchment 5

No groundwater or surface water data is collected from Catchment 5 as part of the Ongoing Monitoring Program . The 2023 mass flux study confirmed this to be appropriate as <1% of the PFAS mass flux migrates from this area. The significance of potential PFAS migration from this catchment is considered when reviewing the data for Warill Creek (see **Section 8.5**).

8.3.6 Catchment 6

8.3.6.1 Groundwater

Groundwater data collected from Catchment 6 as part of the Ongoing Monitoring Program has been summarised in **Table 8-5**.

Monitoring well MW047 is located cross gradient of CPSA B, however, is installed adjacent to the on-Base stormwater drain which received discharge from CPSA B. An increasing trend with a 98.9% confidence factor was reported for MW047. The trend is considered potentially associated with ongoing infiltration of impacted surface water, the mobilisation of PFAS as consequence of increased groundwater elevations over 2022 and 2023 (see **Table A1, Appendix A**) and may relate to stockpile management activities associated with the new STP construction project (see **Section 6.2.3).** Upstream surface water sample location SW048 reports historical Sum of PFAS concentrations ranging between 0.79 – 24.4 µg/L.

Table 8-5: Catchment 6 Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW047 (Tertiary Formation)	CPSA B (cross gradient)	0.68 – 7.85	<0.01 -0.29	1.1 – 15.5	1.21 – 20.4	Increasing (98.9%)

8.3.6.2 Surface Water and Sediment

Surface water and sediment data collected from Catchment 6 as part of the Ongoing Monitoring Program represents a drainage line receiving runoff from CPSA B (upstream of MW047). The following table presents a summary of the data collected. Based on review of the Base stormwater management infrastructure, the surface water from sample location SW048 is discharging to CPSA E. No trend has been identified for SW048.The significance of the concentration detected in this catchment is considered in more detail when reviewing the off-Base data for Warill Creek (see **Section 8.5**).

Table 8-6: Catchment 6 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW/SD048	CPSA B	2.42	0.18	2.96	4.65	0.118	0.0010	0.127	0.144

8.3.7 Catchment 7

Groundwater data collected from Catchment 7 as part of the Ongoing Monitoring Program has been summarised in **Table 8-7.** Higher concentration of PFAS occurs within the vicinity of CPSAs and surface water drainage features downstream of CPSAs. The highest concentrations within the catchment was recorded at monitoring well MW021, located within CPSA D (sewage treatment plant) which receives PFAS impacted wastewater and stormwater runoff from various Base operations. MW021 reported new maximums for PFOA, PFOS and Sum PFHxS and PFOS in October 2023. Both monitoring wells MW021 and MW032 (located downgradient of MW021) reported increasing trends with confidence factors of 99.5% and 98.5%, respectively. The results indicate a potential ongoing contribution of PFAS associated with CPSA D, with increasing trends potentially influenced by increased groundwater elevations from 2022 onward (see **Table A1, Appendix A**).

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Table 8-7: Catchment 7 Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW021 (Alluvium)	CPSA D	148	4.72	191	211	Increasing (99.5%)
MW032 (Alluvium)	CPSA D (downgradient)	20.9 – 24.1	2.02 – 2.13	29.9 – 35.3	41.7 – 48.4	Increasing (98.5%)
MW037 (Alluvium)	CPSAC	0.44 – 0.84	0.084 – 0.13	5.94 – 8.98	13.0 – 17.1	No trend (54.3%)

8.3.7.1 Surface Water and Sediment

Surface water and sediment data collected from Catchment 7 as part of the Ongoing Monitoring Program represents a north-west to east drainage line receiving stormwater discharge from CPSA C and CPSA D. The following table (**Table 8-8)** presents a summary of the data collected in order of upstream to downstream.

The concentrations detected indicate that CPSA C and CPSA D represent PFAS sources to surface water on the Base. A new maximum for Sum of PFHxS and PFOS was reported for SW028 in October 2023. No trend has been identified at this sample location.

The significance of the concentrations detected in this catchment is considered in more detail when reviewing the off-Base data for Warill Creek (see **Section 8.5**).

Table 8-8: Catchment 7 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW/SD028	CPSA C	<0.02 – 0.94	<0.01 – 0.05	0.02 – 2.22	0.02 – 3.7	0.015 – 0.0196	<0.0002 - <0.001	0.015 – 0.0211	0.0154 – 0.0218
SW/SD008	CPSA D	0.39 – 2.56	0.02 – 0.18	0.62 – 4.19	0.89 – 5.90	0.0276 – 0.0343	0.0002 – 0.0003	0.03 – 0.0359	0.039 – 0.0398

8.3.8 Catchment 8

8.3.8.1 Groundwater

Groundwater data collected from Catchment 8 as part of the Ongoing Monitoring Program has been summarised in **Table 8-9.** Higher concentrations of PFAS occurs within the vicinity of relevant CPSAs and surface water drainage features downstream of the CPSAs. The highest concentrations of PFAS in this catchment were recorded at monitoring well MW046, located in CPSA V (AFFF Waste Water Holding Tank). The holding tank is understood to have historically received AFFF wastewater which is later decanted and

disposed to licenced off-Base facilities. The DSI (CH2M Hill, 2018) reported that cracks were identified in 2016 indicating potential containment breaches. The tank is understood to have been repaired and put back into service. New historical minimums and a decreasing trend was reported for MW046 with a confidence factor of 99.9%, indicating the tank repairs were successful in reducing contaminant migration associated with containment breaches.

Increasing trends were identified for monitoring wells MW025 and MW033. Monitoring well MW025 is located east of Catchment 8, adjacent to the catchment's major surface water discharge point into Bremer River. The increasing trend is therefore considered to be associated with ongoing infiltration of PFAS impacted surface water originating in Catchment 8 and/or an increase in groundwater elevation over the 2022 monitoring period (see **Table A1, Appendix A**). A probably increasing trend was identified for MW033 (CPSA A), which is noted to have small historical range and a number of non-detects. The trend should be assessed following the 2024-2025 monitoring period.

The following is noted with respect to newly installed monitoring wells:

- Monitoring well MW536 (installed to replace historical well MW009) reported concentrations of PFOS, Sum of PFHxS and PFOS and Sum of PFAS lower than results historically reported for MW009 (within the same order of magnitude). PFOA was reported to be consistent with historical data;
- Monitoring well MW537 (installed to replace historical well MW015) reported concentrations of PFOS, PFOA, Sum of PFOS and PFHxS and Sum of PFAS within the historical range recorded for MW015; and
- Monitoring well MW539 (installed to replace historical MW039) reported concentrations of Sum of PFHxS and PFOS, PFOA and Sum of PFAS are higher than historically reported for MW039 and included a first time detection for PFOA not previously reported for MW039. PFOS concentrations are consistent with historical data.

Table 8-9: Catchment 8 Groundwater Summary (October 2023 - July 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend (confidence factor)
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	
MW025 (Alluvium)	East of Catchment 8	1.09 – 1.39	0.13 – 0.15	2.36 – 2.46	4.19 – 4.31	Increasing (97.9%)
MW026 (Tertiary Formation)	CPSA W (downgradient)	<0.01	<0.01	<0.01	<0.01	No trend (68.1%)
MW033 (Walloon Coal Measures)	CPSA A	<0.01 – 0.02	<0.01	<0.0 – 0.02	0.02 - 0.19	Probably increasing (91.8%)
MW041 (Walloon Coal Measures)	CPSA X	0.13 – 0.33	<0.01 – 0.01	0.26 – 0.49	1.81 – 2.43	No trend (82.1%)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend (confidence factor)
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	
MW046 (Tertiary Formation)	CPSA V	26.8 – 195	2.18 – 14.2	36.3 – 247	60.6 – 373	Decreasing (99.3%)
MW536 (Alluvium)	CPSA A (downgradient)	0.94	0.08	1.56	2.47	NA
MW537 (Alluvium)	CPSA Y	0.18	0.02	0.44	1.72	NA
MW539 (Alluvium)	CPSA A (downgradient)	<0.01	0.04	4.26	16.1	NA

8.3.8.2 Surface Water and Sediment

Surface water and sediment data collected from Catchment 8 as part of the Ongoing Monitoring Program represents several stormwater drains which later converge at sample location SW/SD003. It is unclear if the catchment boundaries are entirely correct, as SW076 appears to receive discharge from Catchment 9 (CPSA U in particular). The following table presents a summary of the data collected in order of upstream to downstream.

The following is noted with respect to surface water in Catchment 8:

- The sediment data is relatively limited and does not explain the surface water data. As such, the discussion has focused upon surface water. It is noted that the PFAS in sediment profile significantly changes between locations SD002 and SD003, with PFOS being the sole PFAS compound detected in SD003;
- The surface water data for SW0059 represents the highest PFAS concentrations in Catchment 8. Based on review of the stormwater infrastructure for the Base, this location received drainage from the Fire Fighting Training School (CPSA W);
- Overall, the PFAS concentrations reduce less than an order of magnitude between the upstream and downstream locations (predominantly within the 1-10µg/L range);
- There is a lack of data between location SW003 and the Bremer River sampling location SW047 (approximately 1.5km section with no data);
- There is no surface water or sediment data being collected for the drain west of CPSA A. This is considered to represent a data gap, particularly in consideration of this area being an initial focus of future remediation works related to the TSF.

Trend assessment completed for sum of PFAS concentrations have identified decreasing trends at SW002 (99.2%) and SW003 (96.2%), alongside a probably decreasing trend at SW037 (94.2%).

The significance of the concentrations detected in this catchment is considered in more detail when reviewing the off-Base data for Bremer River (see **Section 8.4**).

Table 8-10: Catchment 8 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW / SD037 (western drain)	CPSA Y	2.42	0.15	4.51	6.88	0.313 – 1.06	0.002 – 0.0251	0.339 – 1.24	0.363 – 1.43
SW / SD 059 (western drain)	Down-stream of CPSA Y, CPSA A (fire training school)	8.67	1.0	14.8	25.4	0.378 – 0.588	0.007 – 0.0073	0.419 – 0.625	0.464 – 0.676
SW / SD011 (central drain)	CPSA S, CPSA R	2.44	0.08 – 0.11	3.51 – 4.04	5.0 – 5.33	0.369 – 0.976	<0.001 – 0.0002	0.047 – 0.105	0.0426 – 0.107
SW / SD030 (central drain)	Down-stream of CPSA V	3.26	0.14	5.52	7.71	0.0388 – 0.176	0.0002 – 0.0017	0.0411 – 0.189	0.0421 – 0.206
SW/SD002 (central drain)	Down-stream of fire training pad in CPSA A	0.76	0.06	1.19	1.86	0.0038 – 0.0090	<0.0002 – 0.0004	0.0041 – 0.0098	0.0045 – 0.0117
SW/SD027 (eastern drain)	CPSA Q	0.89 – 4.88	0.05 – 0.1	1.52 – 6.8	1.93 – 7.9	0.0243 – 0.0422	<0.0002 - <0.0005	0.0273 – 0.0471	0.0279 – 0.0486
SW/SD076 (eastern drain)	Down-stream of 27 (West of CPSA U)	4.73	0.4	8.11	12.9	0.081 – 0.428	0.0021 – 0.0067	0.0929 – 0.476	0.111 – 0.538
SW/SD003 (at confluence of eastern and central drains)	Down-stream of SW/SD002	0.55 – 0.79	0.04 – 0.06	0.85 – 1.12	1.29 – 1.69	0.0006 – 0.0013	<0.0002	0.0006 – 0.0013	0.0006 – 0.0013

8.3.9 Catchment 9

8.3.9.1 Groundwater

Groundwater data collected from Catchment 9 as part of the Ongoing Monitoring Program has been summarised in **Table 8-11**. The highest concentrations of PFAS in this catchment were recorded at monitoring well MW007, located adjacent to CPSA AA (triple interceptor pit at engine test cell facilities 1 and 2). The triple interceptor pit is considered to represent a diffuse source of PFAS as it potentially receives PFAS contaminated wastewater from a variety of Base facilities. This monitoring well is noted to report a decreasing trend for sum of PFAS, with a 99.3% confidence.

Monitoring well MW535 which was installed to replace to historical monitoring well MW008, reported concentrations of PFOA, PFOS, Sum of PFOS and PFHxS and Sum PFAS consistent with historical results from MW008.

Table 8-11: Catchment 9 Groundwater Summary (October 2023 - July 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW007 (Alluvium)	CPSA AA (downgradient)	20.8	0.98	33.9	43.7	Decreasing (99.3%)
MW035 (Alluvium)	East of Catchment 9	<0.01	<0.01	<0.01	<0.01	No trend (68.1%)
MW535 (Alluvium)	East of Catchment 9	<0.01	<0.01	<0.01	<0.01	NA

8.3.9.2 Surface Water and Sediment

Surface water and sediment data collected from Catchment 9 as part of the Ongoing Monitoring Program represents several stormwater drains receiving discharge from a number of CPSAs. Based on review of the Base stormwater infrastructure, the sample locations are not linear, but are collected form drains which later converge. The following table presents a summary of the data collected.

The following is noted with surface water in Catchment 9:

- The surface water data for SW0056 represents the highest PFAS concentrations in Catchment 9. Based on review of the stormwater infrastructure for the Base, this location receives drainage from the 38 Squadron Hangars (CPSA U) and potentially drains into Catchment 7; and
- There is a lack of data between SW/SD056 and SW/SD053 and the Bremer River sampling location SW/SD050.

A new maximum was reported for SW056; however, no trend was identified for this well. The new maximum should be assessed as part of the 2024-2025 monitoring program.

The significance of the concentrations detected in this catchment is considered in more detail when reviewing the off-base data for Bremer River (see **Section 8.4**).

Table 8-12: Catchment 9 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW / SD038	CPSA AA	<0.01	<0.01	<0.01	<0.01	<0.0016 – 0.0019	<0.0002	<0.0002 – 0.0019	<0.0002 – 0.0019
SW / SD053	CPSA Q	0.17 - 1.10	<0.01 – 0.02	0.3 - 1.51	0.32 – 1.70	<0.0476 – 0.0129	<0.0002 – 0.0012	0.0033 – 0.0153	0.0050 – 0.0165
SW / SD056	CPSA U	1.29 - 4.43	0.1 - 0.48	2.19 – 7.77	3.36 – 7.77	0.360 – 0.427	<0.001 – 0.0075	0.421 – 0.434	0.435 – 0.498

8.3.10 Catchment 10

8.3.10.1 Groundwater

No groundwater data is collected from Catchment 10 as part of the Ongoing Monitoring Program .

8.3.10.2 Surface Water and Sediment

Surface water and sediment data collected from Catchment 10 as part of the Ongoing Monitoring Program represents two stormwater drains receiving discharge from CPSA J and CPSA F. Based on review of the Base stormwater infrastructure, the sample locations are not linear (e.g. updater to downstream), nor do they later converge prior to discharge to Warrill Creek. The following table presents a summary of the data collected.

The following is noted with respect surface water in Catchment 10:

- The surface water data for SW0067 represents the highest PFAS concentrations in Catchment 10. Based on review of the stormwater infrastructure for the Base, this location receives drainage from the former FTA and operations testing area (CPSA J); and
- There is a lack of surface water data between sample locations SW/SD064 and SW/SD067 and the discharge point (DP14) located upgradient of Warrill Creek sampling location SW/SD018.

The significance of the concentrations detected in this catchment is considered in more detail when reviewing the off-base data for Warrill Creek (see **Section 8.5**).

Table 8-13: Catchment 10 Surface Water and Sediment Summary (October 2023 – May 2024)

Location	Adjacent Feature	Surface Water				Sediment			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	PFOS (mg/kg)	PFOA (mg/kg)	Sum PFOS + PFHxS (mg/kg)	Sum PFAS (mg/kg)
SW/SD067	CPSA J	6.41	0.27	12.3	21.2	1.28 – 1.68	0.0076 – 0.0099	1.41 – 1.82	1.56 – 1.95
SW/SD064	CPSA F	0.95 - 1.44	0.04 – 0.06	1.78 – 2.73	2.76 – 4.64	0.125 – 0.219	0.0007 – 0.001	0.136 – 0.232	0.145 – 0.241

8.3.11 Catchment 11

8.3.11.1 Groundwater

Groundwater data collected from Catchment 11 as part of the Ongoing Monitoring Program has been summarised in **Table 8-14.** There are no CPSAs in Catchment 11, however, it is noted to be hydraulically downgradient of Catchment 9 and in the vicinity of the major discharge feature for Catchment 9.

An increasing tend with a 99% confidence factor was reported for well MW024, which is noted to have small historical range and a number of non-detects. The trend should be assessed following the 2024-2025 monitoring period.

Newly installed monitoring well MW538 (installed to replace MW018) reported concentrations within the historical range reported for MW018.

Table 8-14: Catchment 11 Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW538 (Alluvium)	East of CPSA P	<0.04	<0.01	0.05	0.05	NA
MW024 (Alluvium)	East of Catchment 11	<0.01	<0.01	0.04 – 0.08	0.04 – 0.12	Increasing (99.0%)
MW055S (Alluvium)	East of Catchment 11	1.01 – 1.12	0.08	2.40 – 2.72	3.22 – 3.60	No trend (52.4%)
MW055D (Tertiary Formation)	East of Catchment 11	<0.01 – 0.03	<0.01	<0.01 – 0.06	<0.01 – 0.06	No trend (74.5%)

8.3.11.2 Surface Water and Sediment

No surface water or sediment data is collected from Catchment 11 as part of the Ongoing Monitoring Program . This is considered to be appropriate based on the absence of CPSAs.

8.4 Bremer River

8.4.1 Groundwater

Groundwater data collected from monitoring wells adjacent to the Bremer River as part of the Ongoing Monitoring Program have been summarised in **Table 8-15.** It noted that some groundwater monitoring wells adjacent to the Bremer River fall within the catchment boundaries and have has results previously summarised. These results have been replicated here for completeness.

Higher concentrations of PFAS in monitoring wells adjacent to the Bremer River are noted to be located within the vicinity of surface water drainage lines and major discharge points which receive the majority of surface water runoff from the catchments and CPSAs contained therein, namely:

- DP5 (Catchment 8) – MW025;
- DP6 (Catchment 9) – MW055S; and
- DP9 (Catchment 3) – MW028 and MW029.

Increasing trends were identified for MW024, MW025 and MW029. As previously discussed, MW024, is noted to have small historical range and a number of non-detects. The trend should be assessed following the 2024-2025 monitoring period. In relation to MW025 and MW029, the increasing trends are considered to be potentially associated with infiltration PFAS impacted surface water from adjacent drainage features and/or increase in groundwater elevations over the 2022 monitoring period (see **Table A1, Appendix A**).

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A new historical maximum for Sum PFHxS and PFOS was reported from MW036, MW055D and MW055S in April 2024. No apparent trend has been identified for these wells. The new maximum concentrations should be further assessed as part of the 2024-2025 monitoring program.

Table 8-15: Bremer River Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW034 (Alluvium)	North east of Catchment 1	<0.01	<0.01	<0.01	<0.01	No trend (61.7%)

Location	Adjacent Feature	Groundwater				Sum of PFAS Trend
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	(confidence factor)
MW025 (Alluvium)	East of Catchment 8	1.09 – 1.39	0.13 – 0.15	2.36 – 2.46	4.19 – 4.31	Increasing (97.9%)
MW026 (Alluvium)	East of Catchment 9	<0.01	<0.01	<0.01	<0.01	No trend (68.1%)
MW024 (Alluvium)	East of Catchment 11	<0.01	<0.01	0.04 – 0.08	0.04 – 0.12	Increasing (99.0%)
MW055S (Alluvium)	East of Catchment 11	1.01 – 1.12	0.08	2.40 – 2.72	3.22 – 3.60	No trend (52.4%)
MW055D (Tertiary Formation)	East of Catchment 11	<0.01 – 0.03	<0.01	<0.01 – 0.06	<0.01 – 0.06	No trend (74.5%)
MW044 (Alluvium)	East of Catchment 11	<0.01	<0.01	<0.01 – 0.02	<0.01 – 0.02	No trend (47.3%)
MW036 (Alluvium)	East of Catchment 3 (CPSA L)	<0.01 – 0.01	<0.01	0.01 – 0.08	0.01 – 0.08	No trend (8.7%)
MW028 (Alluvium)	East of Catchment 3 (CPSA L)	12.5 – 32.1	0.74 – 1.44	21.7 – 52.6	29.5 - 68.1	Stable (70.5%)
MW029 (Alluvium)	East of Catchment 3 (CPSA L)	2.3 – 4.33	0.16 – 0.23	7.51 – 9.06	10.5 – 12.3	Increasing (99.9%)
MW056I (Tertiary Formation)	East of Catchment 3	<0.01 – 0.01	<0.01	<0.02 – 0.03	<0.02 – 0.03	No trend (60.6%)
MW056S (Alluvium)	East of Catchment 3	<0.02 – 0.01	<0.01	0.01	0.01	Stable (70.3%)

8.4.2 Surface Water and Sediment

Groundwater and surface water from catchments 1, 8, 9, 11 and 3 discharge into Bremer River. It is noted that Catchment 3 discharges into both Bremer River and Warrill Creek.

The following presents a summary of the surface water and sediment data for Bremer River, with the samples organised from upstream to downstream. The results are considered to be consistent with the 2023 mass flux study:

- Concentrations at locations upstream of Catchment 8 are below the LOR in surface water and predominantly below the LOR in sediment;
- Concentrations at locations downstream of Catchment 8 (inclusive of Catchment 3 discharge points) are elevated above upstream concentrations;
- Concentrations in locations east of Catchments 8, 9, 11 and 3 are relatively consistent (i.e. as opposed to a reduction of concentrations downstream of a specific discharge point), which may be indicative of:
    - Relatively consistent PFAS concentrations from the catchment discharge points; and
    - Groundwater discharge into Bremer River.

The SW/SD047 results are lower than expected for a sampling location adjacent to the Catchment 8 discharge point. This is assumed to relate to the sampling location being upstream of the discharge point. When considering the SW/SD045 results, the concentrations detected at location SW/SD040 (2km downstream) are considered to be higher than what may reasonably be expected if the base is the sole source of PFAS contamination.

In relation to sum of PFAS concentration trends, several locations have reported decreasing / potentially deceasing trends. The trends are associated with a reduction in concentrations reported from 2017 to 2019, which were an order of magnitude higher, noting that new historical minimum for SW045 and SW040 were reported during the April 2024 monitoring event.

A general reduction in contaminant concentrations as a consequence of reduced mass discharge is considered to be consistent with what may reasonably be expected given the scale of earthworks and capping activities conducted since 2017, inclusive of significant works within Catchment 3 (e.g. Battlefield Airlifter project, Growler projects) as well as establishment of water treatment plants in Catchment 1 and Catchment 7 (e.g. fire training water now captured and treated). Above average rainfall since 2020 would be expected to both mobilise additional PFAS and dilute PFAS concentrations during periods of high flows. It is currently unclear to what extent above average rainfall conditions could explain the apparent reducing trends and additional monitoring will be required to confirm.

Table 8-16: Summary of Bremer River Surface Water and Sediment (October 2023 – May 2024)

Location	Area	Surface Water (µg/L)				Surface Water Sum PFAS Trend (confidence factor)	Sediment (mg/kg)			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS	Sum PFAS in Water		PFOS	PFOA	Sum PFOS + PFHxS	Sum PFAS in Sediment
SW/SD025	Background, west of Catchment 1 and upstream of DP1	<0.01	<0.01	<0.01	<0.01	No trend (70.5%)	<0.0002	<0.0002	<0.0002	<0.0002
SW/SD039	Background, west of Catchment 1 and upstream of DP1	<0.01	<0.01	<0.01	<0.01	No trend (53.0%)	<0.0014 – 0.0006	<0.0002 - <0.0005	<0.0002 – 0.0006	<0.0002 – 0.0006
SW/SD091	West of Catchment 1, downstream of DP1	<0.01	<0.01	<0.01	<0.01	Stable (45.2%)	<0.0006	<0.0002	<0.0002	<0.0002
SW/SD090	West of Catchment 1, adjacent to DP2	<0.01	<0.01	<0.01	<0.01	Stable (45.1%)	<0.0004	<0.0002	<0.0002	<0.0002
SW/SD089	North of Catchment 1, adjacent to DP3	<0.01	<0.01	<0.01	<0.01	Stable (45.6%)	<0.0022	<0.0002	<0.0002	<0.0002
SW/SD052	North of Catchment 1, adjacent to DP4	<0.01	<0.01	<0.01	<0.01	No trend (60.3%)	<0.0006	<0.0002	<0.0002	<0.0002
SW/SD088	North of Catchment 1, downstream of DP4	<0.01	<0.01	<0.01	<0.01	Stable (63.6%)	<0.0004	<0.0002	<0.0002	<0.0002
SW/SD047	East Catchment 8, adjacent to DP5	<0.01	<0.01	<0.01	<0.01	Decreasing (99.5%)	<0.0018	<0.0002	<0.0002	<0.0002
SW/SD094	East of Catchment 8, Downstream of DP5	0.05	<0.01	0.07 – 0.10	0.07 – 0.10	Probably decreasing (94.6%)	0.0063	<0.0002	0.0063	0.0068
SW/SD036	North East of Catchment 9, downstream of DP5	0.01– 0.06	<0.01	0.01 – 0.10	0.01 – 0.2	No trend (75.3%)	<0.0018	<0.0002	<0.0002	0.0060
SW/SD050	East of Catchment 9, adjacent to DP6	0.01 – 0.39	<0.01 – 0.02	0.01 – 0.51	0.01 – 0.64	Decreasing	<0.0024	<0.0002	<0.0002	<0.0002

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Location	Area	Surface Water (µg/L)				Surface Water Sum PFAS Trend	Sediment (mg/kg)			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS	Sum PFAS in Water	(confidence factor)	PFOS	PFOA	Sum PFOS + PFHxS	Sum PFAS in Sediment
						(95.5%)				
SW/SD051	East of Catchment 11, downstream of DP7	0.04 – 0.034	<0.01 – 0.03	0.04 – 0.54	0.04 – 0.72	Decreasing (98.2%)	<0.0052	<0.0002	<0.0002	<0.0002
SW/SD098	East of Catchment 3, downstream DP7	<0.02 – 0.34	<0.01 – 0.02	<0.01 - 0.54	<0.01 – 0.73	No trend (72.7%)	0.0036	<0.0002	0.0038	0.0040
SW/SD045	Downstream of Bremer River and Warrill Creek confluence	<0.02 – 0.11	<0.01	<0.01 – 0.17	<0.01 – 0.17	Decreasing (99.0%)	0.0021 – 0.0043	<0.0002 - <0.001	0.0041 – 0.0045	0.0041 – 0.0045
SW/SD040	Approximately 2km downstream of SW/SD45, north of abattoir	0.01– 0.15	<0.01	0.01 – 0.26	0.01 – 0.28	Decreasing (95.7%)	0.0021	<0.0002	0.0021	0.0021

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8.5 Warrill Creek

8.5.1 Groundwater

Groundwater data collected from monitoring wells adjacent to the Warrill Creek as part of the Ongoing Monitoring Program have been summarised in **Table 8-15.** It noted that some groundwater monitoring wells adjacent to Warrill Creek which fall within the catchment boundaries and have had results previously summarised. These results have been replicated here for completeness.

Monitoring wells adjacent to the Warrill Creek with higher concentrations of PFAS are noted to be either located within the vicinity of surface water drainage lines and major discharge points which receive the majority of surface water runoff from the catchments and CPSAs contained therein and/or directly located within CPSAs. The highest concentration of PFAS is recorded within MW032, located downgradient of CPSA D (Sewage Treatment Plant) which receives PFAS impacted wastewater from across the operational Base. An increasing trend was identified for this location.

Additional increasing trends were identified for MW054S and MW050. Monitoring well MW054S is located on the southern side of Warrill Creek and has reported concentrations an order of magnitude higher than upstream and adjacent surface water sample locations (SW/SD015 and SW/SD016). The extent of PFAS downgradient of this well is not delineated by the current Ongoing Monitoring Program , noting that monitoring of well 154495 located to the south has historically been monitored as reported in the DSI (CH2M Hill, 2018) (see **Figure 7**). Monitoring well MW050 is located downgradient of CPSA G (Former FTA and Operations Testing Area), indicating potential migration of contamination.

It is noted that MW057S is located to the east of Warrill Creek and has reported concentration of PFAS above drinking water and recreational use criteria. It is noted the well is located immediately east of CPSA H (Potential Former FTA and Landfill) There are no adjacent surface water monitoring locations, with the nearest upstream and downstream sample locations (SW020 and SW100) reporting concentration an order of magnitude lower. A discharge point (DP13) is noted to be located upstream, however, there is no data at this location. Further delineation of groundwater impacts to the east of Warrill Creek has not been achieved.

Table 8-17: Warrill Creek Groundwater Summary (October 2023 - May 2024)

Location	Adjacent Feature	Groundwater				Trends
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS (µg/L)	Sum PFAS (µg/L)	
MW032 (Alluvium)	South of Catchment 7, CPSA D (downgradient)	20.9 – 24.1	2.02 – 2.13	29.9 – 35.3	41.7 – 48.4	Increasing (98.5%)
MW048 (Alluvium)	South of Catchment 4 (CPSA E)	1.50 – 6.52	0.03 – 0.15	2.63 – 10.0	3.15 – 12.1	Decreasing (99.0%)
MW022 (Alluvium)	West of Catchment 10 (CPSA CC)	0.68 – 2.03	0.16 – 0.45	4.47 – 10.1	7.15 – 16.2	Decreasing (99.9%)
MW054S (Alluvium)	West of Catchment 10 (CPSA CC)	0.013	<0.01	0.22 – 0.27	0.22 – 0.3	Increasing (99.6%)
MW054D (Walloon Coal Measures)	West of Catchment 10 (CPSA CC)	<0.01 – 0.02	<0.01	<0.01 – 0.04	<0.01 – 0.04	No trend (57.1%)
MW050 (Alluvium)	South of Catchment 10 (CPSA G)	0.15 – 0.22	<0.01	0.22 – 0.32	0.23 – 0.36	Increasing (99.7%)
MW005 (Alluvium)	East of Catchment 3 (CPSA J)	<0.01 – 0.02	<0.01	0.03 – 0.08	0.03 – 0.08	No trend (68.4%)
MW057S (Alluvium)	East of Catchment 3 (CPSA J), eastern side of Warill Creek	0.15 – 0.35	0.01 – 0.05	0.42 – 1.11	0.61 – 1.72	No trend (74.1%)
MW057I (Tertiary Formation)	East of Catchment 3 (CPSA J), eastern side of Warill Creek	<0.01	<0.01	<0.01	<0.01	No trend (50.0%)

8.5.2 Surface Water and Sediment

Groundwater and surface water from Catchments 7, 6, 5, 4, 2, 10 and 3 discharge into Warrill Creek. It is noted that Catchment 3 discharges into both Bremer River and Warrill Creek. Warrill Creek typically reports lower

concentrations of PFAS in surface water by comparison to Bremer River, despite proximity to numerous CPSAs, numerous discharge points and high concentration of PFAS within adjacent groundwater monitoring wells. The highest concentration of PFAS are reported near the Bremer River and Warrill Creek confluence (SW026).

In relation to sum of PFAS concentration trends, several locations have reported decreasing / potentially deceasing trends. The trends are considered to be associated with a reduction in concentrations reported from 2017 to 2019 or a small range in sum of PFAS concentrations.

Table 8-18: Summary of Warrill Creek Surface Water and Sediment (October 2023 – May 2024)

Location	Area	Surface Water (µg/L)				Surface Water Sum PFAS Trend	Sediment (mg/kg)			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS	Sum PFAS in Water	(Confidence Factor)	PFOS	PFOA	Sum PFOS + PFHxS	Sum PFAS in Sediment
SW/SD043	Upstream of base	<0.01	<0.01	<0.01	<0.01	No trend (74.9%)	<0.0005	<0.0005	<0.0002	<0.0002
SW/SD09	Downstream of Catchment 7, adjacent to DP24	0.02 – 0.03	<0.01	0.02 – 0.03	0.02 – 0.03	No trend (72.9%)	0.0061	<0.0002	0.0064	0.0064
SW/SD004	South of Catchments 4-6, adjacent to DP22 and DP23	0.02 – 0.04	<0.01	0.03 – 0.06	0.03 – 0.06	Stable (45.1%)	0.0043 – 0.0283	0.0002 – 0.0005	0.0031 – 0.0289	0.0033 – 0.0305
SW/SD005	South of Catchment 2, adjacent to DP20 and DP21	<0.01 – 0.04	<0.01	<0.01 – 0.05	<0.01 – 0.05	No trend (77.7%)	0.0029	0.0002	0.0031	0.0033
SW/SD016	West of Catchment 10, downstream of DP 17-19	<0.01 – 0.04	<0.01	<0.01 – 0.06	<0.01 – 0.06	Probably decreasing (91.3%)	<0.0024	<0.0002	<0.0002	<0.0002
SW/SD015	West of Catchment 10, downstream of DP16	<0.01 – 0.05	<0.01	<0.01 – 0.07	<0.01 – 0.07	Stable (72.7%)	<0.005 – 0.0166	<0.0002 - <0.005	<0.005 – 0.0181	<0.05 – 0.0186
SW/SD034	South of Catchment 10, Downstream of DP15	<0.01 – 0.05	<0.01	<0.01 – 0.05	<0.01 – 0.05	No trend (86.0%)	<0.0026	<0.0002	<0.0002	<0.0002
SW/SD018	South of Catchment 10, Downstream of DP14	0.01 – 0.02	<0.01	0.01 – 0.02	0.01 – 0.02	Probably decreasing (92.9%)	0.0034	<0.0002	0.0036	0.0036

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Location	Area	Surface Water (µg/L)				Surface Water Sum PFAS Trend	Sediment (mg/kg)			
		PFOS (µg/L)	PFOA (µg/L)	Sum PFOS + PFHxS	Sum PFAS in Water	(Confidence Factor)	PFOS	PFOA	Sum PFOS + PFHxS	Sum PFAS in Sediment
SW/SD020	South East of Catchment 10	<0.01 – 0.04	<0.01	<0.01 – 0.04	<0.01 – 0.04	No trend (86.1%)	<0.002 – 0.0065	<0.0002 – 0.0002	0.0034 – 0.0071	0.0034 – 0.0075
SW/SD100	East of Catchment 3, Downstream of DP12	<0.01 – 0.04	<0.01	<0.01 – 0.05	<0.01 – 0.05	No trend (47.3%)	<0.0031	<0.0002	<0.0002	<0.0002
SW/SD099	East of Catchment 3, Downstream of DP10 and DP11	<0.01 – 0.05	<0.01	<0.01 – 0.05	<0.01 – 0.05	Probably decreasing (95.0%)	<0.0035	<0.0002	<0.0002	<0.0002
SW/SD026	East of Catchment 3, Downstream of DP10 and DP11 (near Bremer River and Warrill Creek confluence)	0.01 – 0.22	<0.01	0.01 – 0.29	**0.01 – 0.29**	No trend (74.9%)	0.0046 – 0.0075	<0.0002 - <0.001	0.0077 – 0.0078	0.0077 – 0.0078
SW/SD040	Downstream of Bremer River and Warrill Creek confluence	0.01– 0.15	<0.01	0.01 – 0.26	0.01 – 0.28	Decreasing (95.7%)		0.0021	<0.0002	0.0021

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9. Refined Conceptual Site Model

9.1 General

CH2M Hill (2018) developed the conceptual site model (CSM) for the Base. The CSM has been reviewed in consideration of the current information and data available with respect to:

- PFAS source areas;
- PFAS transport pathways; and
- Receptors.

9.2 PFAS Source Areas

A small number of first time detections have been recorded since the DSI (CH2M Hill, 2018) and the 2021-2023 OMR (AECOM, 2024e) and despite the new maximum and minimums / order of magnitude increases and decreases, no significant evidence of additional new PFAS source areas were identified.

The mass flux study (Senversa, 2023) identified the relatively higher estimates of PFAS mass discharge from Catchment 3 and Catchment 8 are likely attributed to the 'High' and 'Moderate' risk CPSAs within these areas, including CPSA A, CPSA N and CPSA V. Relative mass discharge estimates from Catchment 7 also suggest that CPSA D is contributing a significant amount to the Base's PFAS mass discharge, albeit to a lesser degree than Catchments 3 and 8.

The monitoring data indicates:

- Spatially inconsistent evidence of both decreasing and increasing concentration trends in surface water and groundwater within Catchments 1-11 and Warrill Creek. This observation may be related to above average rainfall during the 2020-2022 period (e.g. mobilisation of PFAS through raising groundwater levels) and reflects the complexity created by the scale of the Base, the ongoing investigations to further define primary PFAS source areas, the number of active earthworks projects and the spoil management activities;
- Widespread evidence of reducing surface water concentration trends in Bremer River.

The reducing trends in Bremer River water samples are considered to potentially relate to a broad range of PFAS management activities which have occurred since 2017.

9.3 Transport Pathways

The mass flux study (Senversa, 2023) estimated that surface water comprises approximately 99% of the total PFAS mass discharging from the Base per year, with approximately 1% attributed to discharge via groundwater pathways. As such, surface water represents the primary transport pathway of concern.

9.4 Receptors

No new receptors have been identified.

9.5 CSM Revision

No new sources, pathways or receptors were identified; however, the migration pathway of PFAS transportation by surface water flow was identified to be more significant than previously detailed within CH2M Hill (2018). Furthermore, the majority of PFAS mass migrating off-base (approximately 90%) was identified to be attributed to three catchments.

10. Risk Profile

Based on the data collected during the monitoring period, the risk profile to human health receptors within the Management Area remains unchanged since the publication of the HHRA (EnRisks, 2019). The risk profile has been presented in **Table 10-1.**

Table 10-1: Risk Profile

ID	Risk	Description in the PMAP	Nature of risk	Relevant Risk Group	Risk Timescale
1	Incidental direct contact with PFAS in soil and sediment	Soils within CPSA A and N contain elevated concentrations of PFAS which presents a risk to Base personnel and contractors who are involved in regular soil disturbance activities. Direct contact with soil and sediment on base is mitigated by implementation of the Defence PFAS Construction and Maintenance Framework	Human health	Risk Group 1 – CPSA A and N, located within the RAAF Base Amberley Management Area	Current
2	Human consumption of fish caught from local waterways	PFAS has historically been detected in fish and crustaceans collected from Warrill Creek and Bremer River. Current Queensland Health advice is not to consume fish caught in the Management Area due to presence of PFAS. Additional signage providing precautionary health advice for fishing was installed along Bremer River in July 2024.	Human health	Risk Group 3 – Warrill Creek Risk Group 5 – Bremer River	Current. Queensland Government has precautionary advice in place
3	Consumption of eggs by children	PFAS has been detected in soils on private properties and in water that has historically been used for irrigation. This exposure risk applies to properties where chickens have regular access to PFAS in soil or where water containing PFAS is used for irrigation.	Human health	Risk Group 4 – Properties adjacent to Warrill Creek	Current
4	Consumption of home-slaughtered beef meat	PFAS has been detected in soils on private properties and in water that has historically been used for irrigation. This exposure risk applies to properties where cattle have regular access to PFAS in soil / sediment / pasture, or where water containing PFAS is used for irrigation.	Human health	Risk Group 4 – Properties adjacent to Warrill Creek	Current
5	Consumption of home-slaughtered beef offal (liver and / or kidney)	PFAS has been detected in soils on private properties and in water that has historically been used for irrigation. This exposure risk applies to properties where cattle have regular access to PFAS in soil / sediment / pasture, or where water containing PFAS is used for irrigation.	Human health	Risk Group 4 – Properties adjacent to Warrill Creek	Current

ID	Risk	Description in the PMAP	Nature of risk	Relevant Risk Group	Risk Timescale
6	Multiple exposure pathways	Multiple exposure pathways that relate to the cumulative risks associated with the consumption of fish, eggs and beef products as identified in Risk ID 3 - 6 above and the incidental direct contact with water and swimming in the Bremer River and Warrill Creek.	Human health	Risk Group 3 – Warrill Creek Risk Group 4 – Properties adjacent to Warrill Creek Risk Group 5 – Bremer River Risk Group 6 – Properties adjacent to Bremer River	Current
7	Direct toxicity to terrestrial ecosystems	Concentrations of PFOS in soils, sediments and some grass samples on-Base exceeded investigation criteria for ecological direct exposure (HEPA, 2020). As such, adverse effects on ecological receptors cannot be excluded.	Ecological risk	Risk Group 2 – CPSA A, C, G, W, X, DD, located within	Current
8	Bioaccumulation and effects on higher order consumers within terrestrial ecosystems	Concentrations of PFOS in soils, sediments and some grass samples on- and off-Base exceeded investigation criteria for ecological direct exposure (95% species protection) (HEPA, 2020). As such, adverse effects on ecological receptors cannot be excluded.	Ecological risk	Risk Group 2 – CPSA A, C, G, W, X, DD, located within RAAF Base Amberley Management Area	Current
9	Direct toxicity to aquatic ecosystems	Concentrations of PFOS in surface water exceeded investigation criteria for ecological direct exposure (HEPA, 2020) during the monitoring period. As such, adverse effects on ecological receptors cannot be excluded.	Ecological risk	Risk Group 3 – Warrill Creek Risk Group 5 – Bremer River	Current
10	Bioaccumulation and effects on higher order consumers within aquatic ecosystems	Concentrations of PFOS in surface water exceeded investigation criteria for ecological direct exposure (HEPA, 2020) during the monitoring period. As such, adverse effects on ecological receptors cannot be excluded.	Ecological risk	Risk Group 3 – Warrill Creek Risk Group 5 – Bremer River	Current

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11. Conclusions

The following conclusions are made with respect to the overall objectives of the OMR report:

- *Objective 1: The distribution (spatial and temporal) and transport of PFAS in the Management Area*:
  - The distribution of PFAS in the Management Area has not changed significantly since the previous monitoring period, with the potential exception of:
    - Localised evidence of both reducing and increasing concentration trends in groundwater and surface water; and
    - Relatively widespread evidence of reducing surface water concentration trends in the Bremer River.
  - The significance of both localised and widespread PFAS concentration trends requires further consideration during the 2024-2025 OMR, noting that the concentration typically remain within the same order of magnitude as historical data.
- *Objective 2: Whether the current understanding of risks to human and ecological receptors require review*:
  - The risk profile to human health receptors within the Management Area remains unchanged since the publication of the HHRA (EnRisks, 2019); and
  - The current understanding of risks to human and ecological receptors is only considered to require review with respect to whether reducing surface water concentration trends in the Bremer River are also associated with reducing concentration trends in aquatic biota.
- *Objective 3: PMAP delivery and associated management actions, where relevant*:
  - The key management actions to date have comprised:
    - Preparation of a mass flux study which identified that 99% of the PFAS migrating off-Base is via surface water;
    - Significant earthworks and hardstand construction works across PFAS source areas;
    - Establishment of two water treatment plants to capture and treat PFAS contaminated water generated during fire training activities (CPSA A, CPSA W); and
    - Commencement of replacement of the old Sewage Treatment Plant (CPSA D), with the new Sewage Treatment Plant to provide PFAS treatment capability.
  - Reducing PFAS trends in the Bremer River indicate that initial PMAP delivery and associated management actions are potentially having a measurable impact.

  The Ongoing Monitoring Program should be reviewed in consideration of the findings of this OMR.

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12. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties. The report has been prepared specifically for the client for the purposes of the commission, and no warranties, express or implied, are offered to any third parties and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose. This report should not be amended in any way without prior approval by JBS&G, or reproduced other than in full including all attachments as originally provided to the client by JBS&G.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements or agreed scope of work.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

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13. References

AECOM. (2024a). *Ongoing Monitoring Report (March 2021 to May 2023), PFAS OMP – RAAF Base Amberley*. June 2024.

AECOM. (2024b). *PFAS OMP-RAAF Base Amberley Sampling and Analysis Quality Plan*. January 2024

AECOM. (2024c). *Biannual Sampling – October/November 2023 Groundwater, Surface Water and Sediment Sampling Event.*

AECOM (2024d). *Biannual Sampling – April/May 2024 Groundwater, Surface Water and Sediment Sampling Event*

AECOM. (2024e). *Well Installation and Maintenance Program – June to July 2024, PFAS OMP, South Queensland*

CH2M Hill. (2018). *RAAF Base Amberley PFAS Investigation – Detailed Site Investigation.* November 2018.

CH2M Hill. (2020). *Human Health Risk Assessment, Leichardt Residential Area.* September 2020.

Defence. (2018). Amended June 2021, Defence Contamination Management Manual.

Defence (2021). *PFAS Construction and Maintenance Framework, Version 3.0*. August 2021.

Defence. (2020). *PFAS Management Area Plan*. September 2020.

Defence. (2024). *Ongoing Monitoring Program Reporting Guidance*. February 2024

EnRisks. (2019). *Human Health Risk Assessment for the RAAF Base Amberley PFAS Investigation*. July 2019.

EnRisks. (2020). *Screening Level Ecological Risk Assessment for the RAAF Base Amberley PFAS Investigation.* September 2020.

Heads of Environmental Protection Agencies (HEPA). (2020). *PFAS National Environmental Management Plan, v2*. January 2020.

National Environmental Protection Council (NEPC), 2013. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended April 2013) (ASC NEPM), National Environment Protection Council (NEPC) 2013.

National Health and Medical Research Council, 2019. Guidance on PFAS in Recreational Water. August 2019. August 2019.

Senversa. (2023). *SP3 – PFAS Mass Flux Interpretive Report, RAAF Base Amberley*. October 2023.

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Appendix A Summary Tables

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TABLE A1: Groundwater Parameters

Property ID	Well ID	Sample Date	Aquifer	AOC	Screen depth (m)	Well Depth (mbtoc)	Depth to Water (mbtoc)	TOC Elevation (mAHD)	Ground- water Elevation (mAHD)	Condition of Well	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)	Temp (°C)	Turbidity	Water Colour	Odour	Sheen	Sample Method / Comments
0861	MW002	21/04/2020	Walloon Coal Measures	CPSA A	16.7-23.7	24.27	17.605	Unknown	Unknown	Good	6.53	13814	6.79	202.6	24.4	Clear	Clear	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW002	13/10/2020	Walloon Coal Measures	CPSA A	16.7-23.7	-	-	Unknown	Unknown	Good	0.72	12167	6.39	-3.5	23.5	Turbid	Light brown	No odour	No sheen	Bailer, parameters only
0861	MW002	21/04/2021	Walloon Coal Measures	CPSA A	16.7-23.7	24.14	19.604	Unknown	Unknown	Good	1.42	14186	6.62	188.3	22.5	Low	Brown	No odour	No sheen	Hydrasleeve™
0861	MW002	21/10/2021	Walloon Coal Measures	CPSA A	16.7-23.7	24.12	17.61	Unknown	Unknown	Good	0.41	15203	6.55	280.9	23	Low	Grey	No odour	No sheen	Hydrasleeve™
0861	MW002	31/03/2022	Walloon Coal Measures	CPSA A	16.7-23.7	24.08	17.5	Unknown	Unknown	Good	0.72	13559	6.47	-29.5	175.5	23.3	Light grey	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW002	26/10/2022	Walloon Coal Measures	CPSA A	16.7-23.7	24.34	17.38	Unknown	Unknown	Good	1.21	16243	5.8	161.3	23.4	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW002	22/05/2023	Walloon Coal Measures	CPSA A	16.7-23.7	22.985	18.367	Unknown	Unknown	Good	1.9	15277	6.3	264.4	24.2	-	Cloudy, medium turbidity	No odour	No sheen	HydraSleeve™
0861	MW002	23/10/2023	Walloon Coal Measures	CPSA A	16.7-23.7	24.152	17.245	Unknown	Unknown	Good	1.46	13476	6.47	220.2	25.6	-	Cloudy/Milky, high turbidity	No odour	No sheen	HydraSleeveTM
0861	MW002	19/04/2024	Walloon Coal Measures	CPSA A	16.7-23.7	24.150	17.208	Unknown	Unknown	Good	0.99	13032	6.42	182.2	24.1	-	Brown, high turbidity	No odour	No sheen	HydraSleeveTM
0861	MW005	23/04/2020	Alluvium	CPSA J	13.0-17.0	18	15.42	26.725	11.305	Good	0.46	2324	7.83	68.3	21.6	Clear	Clear	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW005	16/10/2020	Alluvium	CPSA J	13.0-17.0	17.81	15.557	26.725	11.168	Good	0.83	2554	7.7	-29.3	23.9	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW005	21/04/2021	Alluvium	CPSA J	13.0-17.0	18.00	15.604	26.725	11.121	Good	0.46	2374	6.74	188.6	24.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW005	27/10/2021	Alluvium	CPSA J	13.0-17.0	17.82	15.62	26.725	11.105	Good	0.48	2455	7.03	288.4	24.2	Clear	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW005	06/04/2022	Alluvium	CPSA J	13.0-17.0	17.78	15.33	26.725	11.395	Good	0.57	2129	6.87	4.0	209	22.5	Clear	No odour	No sheen	Hydrasleeve™
0861	MW005	24/10/2022	Alluvium	CPSA J	13.0-17.0	17.83	15.012	26.725	11.713	Good	0.93	2612	6.12	121.9	23.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW005	21/04/2023	Alluvium	CPSA J	13.0-17.0	17.8	14.984	26.725	11.741	Good	1.2	983	6.77	291.2	23	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW005	27/10/2023	Alluvium	CPSA J	13.0-17.0	17.804	15.117	26.725	11.608	Good	0.98	2247	6.71	152.6	20.7	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW005	15/04/2024	Alluvium	CPSA J	13.0-17.0	15.178	17.805	26.725	8.920	Good	0.59	2216	6.66	63.1	25.0	-	Clear to milky, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW006	22/04/2020	Alluvium	CPSA M	10.3-14.3	13.355	10.298	21.937	11.639	Good	1.88	1393	8.36	189.2	25.2	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW006	21/10/2020	Alluvium	CPSA M	10.3-14.3	13.36	10.409	21.937	11.528	Good	1.22	1202	8.26	-33.6	23	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW006	19/04/2021	Alluvium	CPSA M	10.3-14.3	13.34	10.416	21.937	11.521	Good	1.09	1390	7.98	275	25	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW006	27/10/2021	Alluvium	CPSA M	10.3-14.3	10.42	13.33	21.937	8.607	Good	1.83	1449	7.71	362.4	22.3	Low	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW006	07/04/2022	Alluvium	CPSA M	10.3-14.3	13.27	10.115	21.937	11.822	Good	1.74	1338	7.66	62.9	267.9	21	Clear	No odour	No sheen	Hydrasleeve™
0861	MW006	26/10/2022	Alluvium	CPSA M	10.3-14.3	13.31	9.88	21.937	12.057	Good	2.14	1742	7.17	165.5	22.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW006	26/04/2023	Alluvium	CPSA M	10.3-14.3	13.312	9.89	21.937	12.047	Good	2.14	1501	7.38	368.7	19.9	-	Pale brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW006	18/04/2024	Alluvium	CPSA M	10.3-14.3	13.291	9.899	21.937	12.038	Good	2.74	1291	7.94	141.8	22.1	-	Light brown to clear, high	No odour	No sheen	Bailer
0861	MW007	28/04/2020	Alluvium	CPSA AA	6.0-10.0	10.78	8.17	23.208	15.038	Good	0.51	3212	8.16	274.6	23.2	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW007	19/10/2020	Alluvium	CPSA AA	6.0-10.0	10.66	8.261	23.208	14.947	Good	0.81	3076	7.66	55.3	25.7	Medium	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW007	19/04/2021	Alluvium	CPSA AA	6.0-10.0	10.70	8.299	23.208	14.909	Good	1.07	4143	7.34	383.7	25.7	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW007	27/10/2021	Alluvium	CPSA AA	6.0-10.0	10.7	8.27	23.208	12.508	Good	1.32	4129	7.39	349.5	24.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW007	06/04/2022	Alluvium	CPSA AA	6.0-10.0	10.78	7.98	23.208	15.228	Good	0.43	927	7.8	-118.8	86.2	23	Clear	No odour	No sheen	Hydrasleeve™
0861	MW007	26/10/2022	Alluvium	CPSA AA	6.0-10.0	10.74	7.804	23.208	15.404	Good	1.23	4054	7.01	190.2	23.9	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW007	21/04/2023	Alluvium	CPSA AA	6.0-10.0	10.755	7.865	23.208	15.343	Good	0.93	864	6.59	300.5	21.8	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW007	18/04/2024	Alluvium	CPSA AA	6.0-10.0	10.752	7.736	23.208	15.472	Good	2.45	4237	7.09	177.8	23.2	-	Brown, high turbidity	No odour	No sheen	Bailer
0861	MW012	27/04/2020	Tertiary Formation	CPSA BB	12.5-17.5	16.55	9.435	26.175	16.74	Good	0.33	13769	6.8	77.3	25.1	Medium	Grey	No odour	No sheen	Hydrasleeve™
0861	MW012	13/10/2020	Tertiary Formation	CPSA BB	12.5-17.5	16.24	9.462	26.175	16.713	Good	1.19	12469	7.1	-68.9	24.7	Clear	Clear	Slight organic odour	No sheen	Hydrasleeve™
0861	MW012	20/04/2021	Tertiary Formation	CPSA BB	12.5-17.5	16.26	9.498	26.175	16.677	Good	0.4	14940	6.71	274.7	25.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW012	27/10/2021	Tertiary Formation	CPSA BB	12.5-17.5	16.18	9.445	26.175	16.73	Good	0.79	14808	6.78	307.2	29.3	Clear	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW012	06/04/2022	Tertiary Formation	CPSA BB	12.5-17.5	16.1	9.42	26.175	16.755	Good	0.39	12977	6.52	-37.1	167.9	25.2	Clear	No odour	No sheen	Hydrasleeve™
0861	MW012	24/10/2022	Tertiary Formation	CPSA BB	12.5-17.5	16.04	9.262	26.175	16.913	Good	1.39	15400	6.2	145.9	28.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW012	20/04/2023	Tertiary Formation	CPSA BB	12.5-17.5	16.07	9.204	26.175	16.971	Good	0.93	990	6.6	294.2	23.2	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW012	27/10/2023	Tertiary Formation	CPSA BB	12.5-17.5	16.098	9.090	26.175	17.085	Good	1.77	13104	6.65	129.8	22.3	-	Clear, non-turbid	Organic odour	No sheen	HydraSleeveTM
0861	MW012	15/04/2024	Tertiary Formation	CPSA BB	12.5-17.5	16.098	9.143	26.175	17.032	Good	0.37	12527	6.63	-3.1	27.1	-	Cloudy, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW020	27/04/2020	Tertiary Formation	CPSA Z	23.5-16.5	15.5	9.34	27.043	17.703	Good	0.5	15586	6.66	39.5	24.6	Medium	Grey	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW020	13/10/2020	Tertiary Formation	CPSA Z	23.5-16.5	16.3	9.394	27.043	17.649	Good	0.17	13355	6.94	-65.4	24.7	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW020	20/04/2021	Tertiary Formation	CPSA Z	23.5-16.5	16.26	9.445	27.043	17.598	Good	0.3	15879	6.74	175	25.4	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW020	27/10/2021	Tertiary Formation	CPSA Z	23.5-16.5	15.37	9.45	27.043	17.593	Good	0.64	16616	6.68	321.7	28.4	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW020	06/04/2022	Tertiary Formation	CPSA Z	23.5-16.5	16.2	9.435	27.043	17.608	Good	0.49	11206	6.41	-6.9	198.1	25.6	Clear	No odour	No sheen	Hydrasleeve™
0861	MW020	25/10/2022	Tertiary Formation	CPSA Z	23.5-16.5	16.62	9.32	27.043	17.723	Good	1.44	7890	6.49	173.9	25.5	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW020	21/04/2023	Tertiary Formation	CPSA Z	23.5-16.5	16.215	9.144	27.043	17.899	Good	1.01	832	6.9	289	24.0	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW020	27/10/2023	Tertiary Formation	CPSA Z	23.5-16.5	15.335	8.984	27.043	18.059	Good	3.19	3231	7.47	232.1	23.9	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW020	15/04/2024	Tertiary Formation	CPSA Z	23.5-16.5	15.333	8.983	27.043	18.060	Good	1.05	5368	6.81	267.8	28.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW021	29/04/2020	Alluvium	CPSA D	2.5-6.0	5.6	3.745	20.72	16.975	Damaged	0.76	915	7.46	80.6	20.8	Low	Clear	Organic odour	No sheen	Hydrasleeve™
0861	MW021	14/10/2020	Alluvium	CPSA D	2.5-6.0	5.63	4.107	20.72	16.613	Damaged	0.64	752	8.27	-61.5	20.7	Turbid	Grey	No odour	No sheen	Hydrasleeve™
0861	MW021	19/04/2021	Alluvium	CPSA D	2.5-6.0	5.52	3.745	20.72	16.975	Damaged	0.75	1104	7.55	332.2	23.2	Medium	Yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW021	28/10/2021	Alluvium	CPSA D	2.5-6.0	5.69	3.84	20.72	16.88	Damaged	0.56	1053	7.27	342	23	Low	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW021	30/03/2022	Alluvium	CPSA D	2.5-6.0	5.67	2.995	20.72	17.725	Good	0.62	978	7.3	-100.2	104.8	24.1	Clear	No odour	No sheen	Hydrasleeve™
0861	MW021	26/10/2022	Alluvium	CPSA D	2.5-6.0	5.62	2.523	20.72	18.197	Good	1.45	1533	6.64	255	22.3	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW021	28/04/2023	Alluvium	CPSA D	2.5-6.0	5.715	2.285	20.72	18.435	Good	3.8	485	7.03	220.5	23.2	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW021	27/10/2023	Alluvium	CPSA D	2.5-6.0	5.730	3.212	20.720	17.508	Good	2.80	995	7.45	320.2	20.0	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW022	21/04/2020	Alluvium	CPSA CC	4.0-9.0	9.8	6.88	19.65	12.77	Good	0.36	1528	7.31	175	20.5	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW022	12/10/2020	Alluvium	CPSA CC	4.0-9.0	9.97	7.13	19.65	12.52	Good	0.37	1490	6.71	57.9	22.8	Medium	Grey	No odour	No sheen	Hydrasleeve™
0861	MW022	12/04/2021	Alluvium	CPSA CC	4.0-9.0	9.78	6.964	19.65	12.686	Good	0.4	1346	6.66	240.9	21.7	Clear	Clear	Slight organic odour	No sheen	Hydrasleeve™
0861	MW022	21/10/2021	Alluvium	CPSA CC	4.0-9.0	9.74	7.022	19.65	12.628	Good	1.01	1735	6.85	307	21.6	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW022	30/03/2022	Alluvium	CPSA CC	4.0-9.0	9.705	6.254	19.65	13.396	Good	0.48	682	6.85	-92.4	112.6	23	Light yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW022	09/11/2022	Alluvium	CPSA CC	4.0-9.0	9.71	6.067	19.65	13.583	Good	4.3	523.5	7.05	214.9	22.1	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW022	28/04/2023	Alluvium	CPSA CC	4.0-9.0	9.70	6.252	19.65	13.398	Good	0.66	1036	6.53	227.6	23.1	-	Light brown, slightly turbid	No odour	No sheen	HydraSleeve™
0861	MW022	25/10/2023	Alluvium	CPSA CC	4.0-9.0	9.790	6.492	19.650	13.158	Good	0.92	1391	6.54	255.6	22.4	-	Orange/Yellow, high	No odour	No sheen	HydraSleeveTM
0861	MW022	19/04/2024	Alluvium	CPSA CC	4.0-9.0	9.790	6.247	19.650	13.403	Good	2.03	723	6.30	141.2	24.4	-	Brown, moderate turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW023	22/04/2020	Alluvium	CPSA M	7.8-11.8	12.84	9.325	20.51	11.185	Good	0.5	8368	7.51	229.1	23.5	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW023	21/10/2020	Alluvium	CPSA M	7.8-11.8	12.85	9.445	20.51	11.065	Good	0.15	7634	7.14	-112.2	22.6	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW023	21/04/2021	Alluvium	CPSA M	7.8-11.8	12.86	9.42	20.51	11.09	Good	0.42	9638	6.92	317.5	24.7	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW023	27/10/2021	Alluvium	CPSA M	7.8-11.8	12.86	9.435	20.51	11.075	Good	0.81	9645	6.98	375.8	24.8	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW023	07/04/2022	Alluvium	CPSA M	7.8-11.8	12.81	8.99	20.51	11.52	Good	0.43	494.1	7.5	54.9	259.9	21.6	Clear	No odour	No sheen	Hydrasleeve™
0861	MW023	26/10/2022	Alluvium	CPSA M	7.8-11.8	12.87	8.788	20.51	11.722	Good	1.28	3654	6.46	182.8	23	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW023	26/04/2023	Alluvium	CPSA M	7.8-11.8	12.87	8.903	20.51	11.607	Good	-	4707	6.89	282.4	23.6	-	Pale brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW023	18/04/2024	Alluvium	CPSA M	7.8-11.8	12.861	8.873	20.510	11.637	Good	2.60	5581	6.85	172.5	22.7	-	Brown, moderate turbidity	No odour	No sheen	Bailer
0861	MW024	15/10/2020	Alluvium	On-base Bremer River	7.0-11.0	11.93	8.643	20.95	12.307	Good	0.54	2857	7.26	74.3	21.5	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW024	20/04/2021	Alluvium	On-base Bremer River	7.0-11.0	11.96	8.005	20.95	12.945	Good	0.24	3543	7.15	356.7	19.9	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW024	21/10/2021	Alluvium	On-base Bremer River	7.0-11.0	11.91	7.75	20.95	13.2	Good	1.17	3814	7.33	287.7	21.9	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW024	04/04/2022	Alluvium	On-base Bremer River	7.0-11.0	11.93	6.738	20.95	14.212	Good	0.81	2687	7.09	92.7	297.7	22.4	Clear	No odour	No sheen	Hydrasleeve™
0861	MW024	26/10/2022	Alluvium	On-base Bremer River	7.0-11.0	11.94	6.979	20.95	13.971	Good	1.64	3921	6.93	181.7	22	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW024	28/04/2023	Alluvium	On-base Bremer River	7.0-11.0	11.91	7.455	20.95	13.495	Good	2.07	3140	7.25	199.1	21	-	Clear, non-turbid	No odour	No sheen	Bailer
0861	MW024	24/10/2023	Alluvium	On-base Bremer River	7.0-11.0	11.910	7.840	20.950	13.110	Good	0.92	3790	7.07	273.0	21.6	-	Clear, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW024	16/04/2024	Alluvium	On-base Bremer River	7.0-11.0	11.910	7.169	20.950	13.781	Good	1.45	3217	7.09	122.1	22.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW025	27/04/2020	Alluvium	On-base Bremer River	7.4-11.4	12.27	9.889	25.42	15.531	Good	0.47	1911	7.35	118.2	24.4	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW025	14/10/2020	Alluvium	On-base Bremer River	7.4-11.4	12.19	10.243	25.42	15.177	Good	1.47	1722	7.94	-21.5	20.8	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW025	16/04/2021	Alluvium	On-base Bremer River	7.4-11.4	12.03	9.524	25.42	15.896	Good	2.43	1828	7.65	286.1	23.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW025	27/10/2021	Alluvium	On-base Bremer River	7.4-11.4	12.25	9.775	25.42	15.645	Good	0.75	1960	7.37	328.4	24	Clear	-	No odour	No sheen	Hydrasleeve™
0861	MW025	06/04/2022	Alluvium	On-base Bremer River	7.4-11.4	12.2	8.715	25.42	16.705	Good	0.62	1347	7.27	-58.9	146.1	23.5	Clear	No odour	No sheen	Hydrasleeve™
0861	MW025	24/10/2022	Alluvium	On-base Bremer River	7.4-11.4	12.47	8.795	25.42	16.625	Good	2.62	1225	7.55	136.3	25.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW025	20/04/2023	Alluvium	On-base Bremer River	7.4-11.4	9.072	12.225	25.42	13.195	Good	0.55	1261	7.27	284.2	23.5	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW025	27/10/2023	Alluvium	On-base Bremer River	7.4-11.4	12.215	9.420	25.420	16.000	Good	3.92	1276	7.41	273.4	22.2	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW025	03/05/2024	Alluvium	On-base Bremer River	7.4-11.4	12.215	8.850	25.420	16.570	Good	3.41	1090	7.27	207.5	22.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW026	28/04/2020	Tertiary Formation	CPSA W	14.5-17.5	17.8	11.385	40.24	28.855	Good	3.69	21902	6.51	224.2	17.8	Turbid	Brown	No odour	No sheen	Hydrasleeve™
0861	MW026	16/10/2020	Tertiary Formation	CPSA W	14.5-17.5	17.53	11.483	40.24	28.757	Good	0.69	22328	7.04	-25.5	25.1	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW026	20/04/2021	Tertiary Formation	CPSA W	14.5-17.5	17.51	11.514	40.24	28.726	Good	0.33	26338	6.54	226.6	23.2	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW026	27/10/2021	Tertiary Formation	CPSA W	14.5-17.5	17.46	11.435	40.24	28.805	Good	0.48	26620	6.73	304.1	26.1	Clear	-	No odour	No sheen	Hydrasleeve™
0861	MW026	06/04/2022	Tertiary Formation	CPSA W	14.5-17.5	17.37	11.445	40.24	28.795	Good	0.67	23494	6.48	-20.8	184.2	24.4	Light yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW026	24/10/2022	Tertiary Formation	CPSA W	14.5-17.5	17.53	11.264	40.24	28.976	Good	3.98	27834	6.22	135.9	25.6	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW026	20/04/2023	Tertiary Formation	CPSA W	14.5-17.5	17.205	11.243	40.24	28.997	Good	0.72	1645	5.85	330.2	24.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW026	27/10/2023	Tertiary Formation	CPSA W	14.5-17.5	17.345	11.260	40.240	28.980	Good	1.48	23941	6.54	182.3	22.2	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW026	15/04/2024	Tertiary Formation	CPSA W	14.5-17.5	17.344	11.243	40.240	28.997	Good	1.79	24303	6.43	278.4	25.9	-	Brown, moderate turbidity	No odour	No sheen	HydraSleeveTM
0861	MW028	22/04/2020	Alluvium	CPSA M	10.5-14.5	13.905	10.43	20.83	10.4	Good	0.3	7639	7.47	234.5	23.5	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW028	15/10/2020	Alluvium	CPSA M	10.5-14.5	13.97	10.601	20.83	10.229	Good	0.35	6754	7	45.4	22.3	Medium	Clear	No odour	No sheen	Hydrasleeve™
0861	MW028	16/04/2021	Alluvium	CPSA M	10.5-14.5	13.79	10.346	20.83	10.484	Good	0.68	7166	7.25	338.6	23.1	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW028	21/10/2021	Alluvium	CPSA M	10.5-14.5	13.92	10.405	20.83	10.425	Good	0.52	7903	7.12	341.8	23	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW028	04/04/2022	Alluvium	CPSA M	10.5-14.5	13.9	9.507	20.83	11.323	Good	0.73	1565	7.13	-13.2	191.8	23.7	Clear	No odour	No sheen	Hydrasleeve™
0861	MW028	26/10/2022	Alluvium	CPSA M	10.5-14.5	13.9	9.64	20.83	11.19	Good	0.91	6378	6.57	196.1	22.7	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW028	20/04/2023	Alluvium	CPSA M	10.5-14.5	13.91	9.888	20.83	10.942	Good	0.5	821	6.49	296.6	20.1	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW028	25/10/2023	Alluvium	CPSA M	10.5-14.5	13.930	11.103	20.830	9.727	Good	2.02	6741	7.03	273.9	23.1	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW028	18/04/2024	Alluvium	CPSA M	10.5-14.5	13.930	9.772	20.830	11.058	Good	0.77	6254	6.97	116.6	23.7	-	Cloudy, high turbidity	No odour	No sheen	HydraSleeveTM
0861	MW029	22/04/2020	Alluvium	CPSA M	7.0-10.0	11.115	9.332	18.23	8.898	Good	2.31	5120	7.67	229.3	23	Medium	Other	No odour	No sheen	Hydrasleeve™
0861	MW029	15/10/2020	Alluvium	CPSA M	7.0-10.0	11.135	9.585	18.23	8.645	Good	2.72	4499	7.29	99.6	23.4	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW029	16/04/2021	Alluvium	CPSA M	7.0-10.0	11.21	8.995	18.23	9.235	Good	1.52	5474	7.32	335.6	23.7	Low	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW029	21/10/2021	Alluvium	CPSA M	7.0-10.0	11.12	9.235	18.23	8.995	Good	1.92	5762	7.17	328	23	Clear	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW029	04/04/2022	Alluvium	CPSA M	7.0-10.0	11.09	7.548	18.23	10.682	Good	1.4	4943	6.93	49.9	254.9	23.7	Clear	No odour	No sheen	Hydrasleeve™
0861	MW029	26/10/2022	Alluvium	CPSA M	7.0-10.0	11.1	8.463	18.23	9.767	Good	3.21	6038	6.71	214.4	22.3	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW029	20/04/2023	Alluvium	CPSA M	7.0-10.0	11.025	8.942	18.23	9.288	Good	0.48	620	6.84	298.3	21	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW029	25/10/2023	Alluvium	CPSA M	7.0-10.0	10.875	9.198	18.230	9.032	Good	1.68	5279	6.96	321.8	22.9	-	Light orange, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW029	18/04/2024	Alluvium	CPSA M	7.0-10.0	10.874	8.534	18.230	9.696	Good	1.41	4994	6.86	167.5	25.3	-	Brown, moderate turbidity	No odour	No sheen	HydraSleeveTM
0861	MW030	22/04/2020	Walloon Coal Measures	CPSA W	17.0-21.0	21.905	17.431	35.84	18.409	Good	0.27	19040	6.93	253.7	21.3	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW030	13/10/2020	Walloon Coal Measures	CPSA W	17.0-21.0	21.85	17.003	35.84	18.837	Good	0.58	17915	6.87	88.1	22.6	Medium	Clear	No odour	No sheen	Hydrasleeve™
0861	MW030	13/04/2021	Walloon Coal Measures	CPSA W	17.0-21.0	20.77	17.712	35.84	18.128	Good	1.45	21874	6.474	265.7	23.8	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW030	21/10/2021	Walloon Coal Measures	CPSA W	17.0-21.0	21.83	17.356	35.84	18.484	Good	0.6	22594	6.71	321.2	24.6	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW030	01/04/2022	Walloon Coal Measures	CPSA W	17.0-21.0	21.82	15.927	35.84	19.913	Good	0.85	19824	6.61	0.8	205.8	22.1	Clear	No odour	No sheen	Hydrasleeve™
0861	MW030	25/10/2022	Walloon Coal Measures	CPSA W	17.0-21.0	21.81	15.396	35.84	20.444	Good	2.97	24823	6.16	191.7	22.9	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW030	23/05/2023	Walloon Coal Measures	CPSA W	17.0-21.0	20.342	15.455	35.84	20.385	Good	2.7	1062	6.75	367.4	19.6	-	Cloudy, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW030	23/10/2023	Walloon Coal Measures	CPSA W	17.0-21.0	21.805	15.470	35.840	20.370	Good	0.57	22852	6.60	378.0	27.9	-	Clear, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW030	19/04/2024	Walloon Coal Measures	CPSA W	17.0-21.0	21.803	15.633	35.840	20.207	Good	3.50	21242	6.86	172.7	21.9	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW031	22/04/2020	Tertiary Formation	CPSA W	14.5-20.5	18.23	15.421	33.45	18.029	Damaged	0.3	13724	7.16	222	21.2	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW031	13/10/2020	Tertiary Formation	CPSA W	14.5-20.5	18.13	15.668	33.45	17.782	Damaged	1.05	12366	6.77	-17.2	22.7	Turbid	Other	No odour	No sheen	Hydrasleeve™
0861	MW031	13/04/2021	Tertiary Formation	CPSA W	14.5-20.5	18.16	15.862	33.45	17.588	Damaged	1.09	14833	6.77	212.4	23.4	Medium	Brown	No odour	No sheen	Hydrasleeve™
0861	MW031	21/10/2021	Tertiary Formation	CPSA W	14.5-20.5	18.07	16.025	33.45	17.425	Damaged	-	-	-	-	-	-	-	-	-	Hydrasleeve™ Parameters
0861	MW031	01/04/2022	Tertiary Formation	CPSA W	14.5-20.5	18.03	16.109	33.45	17.341	Good	1.13	13761	6.56	-57.7	147.3	21.4	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW031	25/10/2022	Tertiary Formation	CPSA W	14.5-20.5	18.01	16.075	33.45	17.375	Good	1.78	16690	6.86	138.8	23.3	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW031	27/04/2023	Tertiary Formation	CPSA W	14.5-20.5	18.065	15.952	33.45	17.498	Good	-	4135	6.71	259.3	21.7	-	Pale brown	No odour	No sheen	Bailer

TABLE A1: Groundwater Parameters

Property ID	Well ID	Sample Date	Aquifer	AOC	Screen depth (m)	Well Depth (mbtoc)	Depth to Water (mbtoc)	TOC Elevation (mAHD)	Ground- water Elevation (mAHD)	Condition of Well	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)	Temp (°C)	Turbidity	Water Colour	Odour	Sheen	Sample Method / Comments
0861	MW031	23/10/2023	Tertiary Formation	CPSA W	14.5-20.5	18.102	15.857	33.450	17.593	Good	1.48	15056	6.61	226.8	25.8	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW031	19/04/2024	Tertiary Formation	CPSA W	14.5-20.5	18.102	15.786	33.450	17.664	Good	2.02	14154	6.59	157.9	21.4	-	Light brown, high turbidity	No odour	No sheen	HydraSleeveTM
0861	MW032	27/04/2020	Alluvium	CPSA D	8.0-14.0	14.7	10.305	26.28	15.975	Good	1.44	2438	7.74	158.5	19.6	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW032	12/10/2020	Alluvium	CPSA D	8.0-14.0	14.68	10.561	26.28	15.719	Good	0.58	2159	7.21	7.7	21.7	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW032	21/04/2021	Alluvium	CPSA D	8.0-14.0	14.68	10.078	26.28	16.202	Good	0.88	2935	6.84	324.1	24.4	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW032	25/10/2021	Alluvium	CPSA D	8.0-14.0	14.68	9.925	26.28	16.355	Good	0.43	2530	6.99	329.7	22.9	Clear	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW032	06/04/2022	Alluvium	CPSA D	8.0-14.0	14.63	9.04	26.28	17.24	Good	1.02	2848	7.05	-28.3	176.7	22.7	Clear	No odour	No sheen	Hydrasleeve™
0861	MW032	24/10/2022	Alluvium	CPSA D	8.0-14.0	14.69	9.365	26.28	16.915	Good	1.91	3442	6.36	135.3	24.2	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW032	27/04/2023	Alluvium	CPSA D	8.0-14.0	14.645	9.767	26.28	16.513	Good	1.06	3280	7.07	155.4	22.7	-	Pale brown	No odour	No sheen	HydraSleeve™
0861	MW032	27/10/2023	Alluvium	CPSA D	8.0-14.0	14.640	11.144	26.280	15.136	Good	2.13	3119	6.97	324.0	19.0	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW032	15/04/2024	Alluvium	CPSA D	8.0-14.0	14.640	9.395	26.280	16.885	Good	1.23	2950	6.89	160.5	23.1	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW033	28/04/2020	Walloon Coal Measures	CPSA A	29.0-33.0	35	24.232	42.456	18.224	Good	8.5	8490	6.69	238.4	-	Medium	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW033	19/10/2020	Walloon Coal Measures	CPSA A	29.0-33.0	34.33	24.249	42.456	18.207	Good	0.82	13437	7.12	-126	28	Low	Clear	Organic odour	No sheen	Hydrasleeve™
0861	MW033	20/04/2021	Walloon Coal Measures	CPSA A	29.0-33.0	34.57	24.257	42.456	18.199	Good	0.08	15590	6.82	123	23.8	Clear	Clear	Organic odour	No sheen	Hydrasleeve™
0861	MW033	27/10/2021	Walloon Coal Measures	CPSA A	29.0-33.0	34.3	24.255	42.456	18.201	Good	0.38	15285	6.97	328.5	26	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW033	06/04/2022	Walloon Coal Measures	CPSA A	29.0-33.0	34.67	24.14	42.456	18.316	Good	0.6	13756	6.66	-48.5	156.5	24.1	Clear	No odour	No sheen	Hydrasleeve™
0861	MW033	26/10/2022	Walloon Coal Measures	CPSA A	29.0-33.0	33	24.065	42.456	18.391	Good	1.65	16326	6.23	137.9	24.4	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW033	23/05/2023	Walloon Coal Measures	CPSA A	29.0-33.0	32.745	24.342	42.456	18.114	Good	3.6	4522	6.62	215.9	22	-	Cloudy, medium turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW033	27/10/2023	Walloon Coal Measures	CPSA A	29.0-33.0	34.287	23.919	42.456	18.537	Good	0.74	14434	6.62	81.1	24.1	-	Light grey, low turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW033	17/04/2024	Walloon Coal Measures	CPSA A	29.0-33.0	34.286	23.612	42.456	18.844	Good	0.68	15671	6.59	79.2	22.1	-	Light grey, moderate	Organic odour	No sheen	HydraSleeveTM
0861	MW034	23/04/2020	Alluvium	On-base Bremer River	5.0-10.0	10.725	8.959	24.305	15.346	Good	1.67	1870	-	215	24.4	Turbid	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW034	13/10/2020	Alluvium	On-base Bremer River	5.0-10.0	10.73	9.321	24.305	14.984	Good	0.53	1626	7.57	-145.9	24.3	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW034	19/04/2021	Alluvium	On-base Bremer River	5.0-10.0	10.7	9.031	24.305	15.274	Good	0.51	2059	7.36	329.1	24.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW034	21/10/2021	Alluvium	On-base Bremer River	5.0-10.0	9.09	10.7	24.305	13.605	Good	2.02	2176	7.5	291.7	23.4	Clear	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW034	01/04/2022	Alluvium	On-base Bremer River	5.0-10.0	10.605	7.635	24.305	16.67	Good	1.05	675	7.69	6	211	21.6	Clear	No odour	No sheen	Hydrasleeve™
0861	MW034	09/11/2022	Alluvium	On-base Bremer River	5.0-10.0	10.65	7.8	24.305	16.505	Good	3.4	1612	6.88	216	26.1	-	Clear	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW034	22/05/2023	Alluvium	On-base Bremer River	5.0-10.0	8.763	8.202	24.305	16.103	Good	2.2	1159	5.91	379.5	22.4	-	Cloudy, medium turbidity	No odour	No sheen	HydraSleeve™
0861	MW034	23/10/2023	Alluvium	On-base Bremer River	5.0-10.0	11.501	8.445	24.305	15.860	Good	1.37	1221	7.24	74.9	27.2	-	Light grey, moderate	No odour	No sheen	HydraSleeveTM
0861	MW034	19/04/2024	Alluvium	On-base Bremer River	5.0-10.0	11.500	7.800	24.305	16.505	Good	2.23	1543	7.23	163.0	22.9	-	Brown, high turbidity	No odour	No sheen	HydraSleeveTM
0861	MW035	22/04/2020	Alluvium	On-base Bremer River	8.0-13.5	14.78	11.259	24.999	13.74	Good	0.57	2649	6.83	202.7	22	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW035	14/10/2020	Alluvium	On-base Bremer River	8.0-13.5	14.555	11.63	24.999	13.369	Good	0.35	2219	6.81	67.6	22	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW035	16/04/2021	Alluvium	On-base Bremer River	8.0-13.5	14.53	11.2	24.999	13.799	Good	0.52	2812	6.67	318.3	23.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW035	21/10/2021	Alluvium	On-base Bremer River	8.0-13.5	14.52	11.3	24.999	13.699	Good	0.65	3064	6.71	279.3	22.5	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW035	04/04/2022	Alluvium	On-base Bremer River	8.0-13.5	14.455	10.26	24.999	14.739	Good	0.82	2553	6.86	111.4	316.4	23.3	Clear	No odour	No sheen	Hydrasleeve™
0861	MW035	09/11/2022	Alluvium	On-base Bremer River	8.0-13.5	14.66	9.996	24.999	15.003	Good	3.5	2344	6.27	265	23.1	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW035	11/05/2023	Alluvium	On-base Bremer River	8.0-13.5	13.5	10.43	24.999	14.569	Good	2.2	2841	6.29	362.6	21.1	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW035	24/10/2023	Alluvium	On-base Bremer River	8.0-13.5	14.505	11.734	24.999	13.265	Good	0.82	3043	6.51	309.2	23.7	-	Clear, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW035	16/04/2024	Alluvium	On-base Bremer River	8.0-13.5	14.501	10.205	24.999	14.794	Good	1.06	2884	6.53	115.1	23.9	-	Clear, low turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW036	22/04/2020	Alluvium	CPSA M	10.2-15.2	15.175	13.211	24.04	10.829	Good	3.57	2028	8.02	236	23.4	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW036	15/10/2020	Alluvium	CPSA M	10.2-15.2	15.18	13.368	24.04	10.672	Good	2	1713	7.43	80.8	21.9	Medium	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW036	16/04/2021	Alluvium	CPSA M	10.2-15.2	14.95	13.212	24.04	10.828	Good	0.94	2108	7.3	316.3	23.7	Low	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW036	21/10/2021	Alluvium	CPSA M	10.2-15.2	15.03	13.215	24.04	10.825	Good	2.4	2142	7.19	336.5	23.9	Turbid	Yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW036	04/04/2022	Alluvium	CPSA M	10.2-15.2	15.01	12.5	24.04	11.54	Good	0.94	1927	7.08	95.1	300.1	23.5	Clear	No odour	No sheen	Hydrasleeve™
0861	MW036	25/10/2022	Alluvium	CPSA M	10.2-15.2	15.01	12.5	24.04	11.54	Good	2.66	2308	7.15	380.7	21.4	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW036	20/04/2023	Alluvium	CPSA M	10.2-15.2	14.98	12.57	24.04	11.47	Good	1.2	923	7	289.9	22.1	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW036	24/10/2023	Alluvium	CPSA M	10.2-15.2	14.785	12.795	24.040	11.245	Good	7.98	2080	7.69	408.1	22.5	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW036	18/04/2024	Alluvium	CPSA M	10.2-15.2	14.784	12.537	24.040	11.503	Good	1.81	2005	7.06	173.0	23.1	-	Brown, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW037	22/04/2020	Alluvium	CPSA C	5.0-10.0	11	8.12	25.219	17.099	Good	0.67	6412	7.57	205.1	23.7	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW037	12/10/2020	Alluvium	CPSA C	5.0-10.0	11	8.348	25.219	16.871	Good	0.11	5468	6.85	-11.1	21.1	Turbid	Grey	No odour	No sheen	Hydrasleeve™
0861	MW037	20/04/2021	Alluvium	CPSA C	5.0-10.0	11.00	8.227	25.219	16.992	Good	0.6	6658	7.14	159.5	22.1	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW037	27/10/2021	Alluvium	CPSA C	5.0-10.0	10.98	8.28	25.219	16.939	Good	0.89	7275	7.05	307.6	25.2	Clear	-	No odour	No sheen	Hydrasleeve™
0861	MW037	30/03/2022	Alluvium	CPSA C	5.0-10.0	10.97	7.567	25.219	17.652	Good	0.7	3998	6.98	-141	64	22.6	Light yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW037	24/10/2022	Alluvium	CPSA C	5.0-10.0	11	7.112	25.219	18.107	Good	2.1	8583	6.01	110.7	23.2	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW037	20/04/2023	Alluvium	CPSA C	5.0-10.0	10.972	7.134	25.219	18.085	Good	1.1	782	6.44	287.5	18.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW037	23/10/2023	Alluvium	CPSA C	5.0-10.0	10.960	7.375	25.219	17.844	Good	0.22	7585	6.67	110.1	21.6	-	Clear, non-turbid	Organic odour	No sheen	HydraSleeveTM
0861	MW037	16/04/2024	Alluvium	CPSA C	5.0-10.0	10.959	7.164	25.219	18.055	Good	1.31	7289	6.70	131.2	21.0	-	Clear, non-turbid	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW041	23/04/2020	Walloon Coal Measures	CPSA X	11.5-14.5	14.5	9.671	46.383	36.712	Good	0.26	18136	6.96	152.3	25.9	Turbid	Light brown	Organic odour	No sheen	Hydrasleeve™
0861	MW041	14/10/2020	Walloon Coal Measures	CPSA X	11.5-14.5	14.39	9.986	46.383	36.397	Good	0.41	12182	6.76	104.8	23.7	Medium	Clear	No odour	No sheen	Hydrasleeve™
0861	MW041	15/04/2021	Walloon Coal Measures	CPSA X	11.5-14.5	-	-	-	-	Unknown	-	-	-	-	-	-	-	-	-	Not sampled- well not located
0861	MW041	22/10/2021	Walloon Coal Measures	CPSA X	11.5-14.5	-	10.021	46.383	36.362	Unknown	0.6	20046	6.68	230	26	Low	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW041	05/04/2022	Walloon Coal Measures	CPSA X	11.5-14.5	14.37	9.745	46.383	36.638	Good	0.45	15939	6.59	-69.1	135.9	26.6	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW041	25/10/2022	Walloon Coal Measures	CPSA X	11.5-14.5	14.43	6.764	46.383	39.619	Good	1.5	14064	6.46	141.8	25.4	-	Black	Hydrocarbon odour	No sheen	Hydrasleeve™
0861	MW041	19/04/2023	Walloon Coal Measures	CPSA X	11.5-14.5	11.141	8.29	46.383	38.093	Good	1.16	1977	6.91	245.1	28.5	-	Brown, medium turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW041	30/10/2023	Walloon Coal Measures	CPSA X	11.5-14.5	14.438	9.972	46.383	36.411	Good	3.22	6109	6.75	259.4	23.0	-	Light brown, moderately	No odour	No sheen	HydraSleeveTM
0861	MW041	03/05/2024	Walloon Coal Measures	CPSA X	11.5-14.5	14.370	9.750	46.383	36.633	Good	0.73	11636	6.50	295.0	22.2	-	Brown, high turbidity	No odour	No sheen	HydraSleeveTM
0861	MW042	28/04/2020	Walloon Coal Measures	CPSA W	24.0-30.0	29.5	22.059	40.036	17.977	Damaged	3.1	16133	6.67	214.8	17.8	Medium	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW042	16/10/2020	Walloon Coal Measures	CPSA W	24.0-30.0	28.9	22.267	40.036	17.769	Damaged	0.85	15407	6.95	-107.3	23.3	Low	Clear	Organic odour	No sheen	Hydrasleeve™
0861	MW042	15/04/2021	Walloon Coal Measures	CPSA W	24.0-30.0	28.9	22.257	40.036	17.779	Damaged	0.7	18958	6.78	120.8	23.2	Low	Grey	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW042	26/10/2021	Walloon Coal Measures	CPSA W	24.0-30.0	28.9	22.49	40.036	17.546	Damaged	0.76	16952	6.81	206.6	25.8	Low	Light grey	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW042	05/04/2022	Walloon Coal Measures	CPSA W	24.0-30.0	28.86	22.27	40.036	17.766	Good	0.78	17179	6.59	-87.8	117.2	26.3	Clear	No odour	No sheen	Hydrasleeve™
0861	MW042	25/10/2022	Walloon Coal Measures	CPSA W	24.0-30.0	26.67	18.83	40.036	21.206	Good	0.00	19317	6.41	-44.9	25.3	-	Black	Hydrocarbon odour	No sheen	Hydrasleeve™
0861	MW042	27/04/2023	Walloon Coal Measures	CPSA W	24.0-30.0	29.075	22.324	40.036	17.712	Damaged	0.62	1617	6.99	139.6	23.4	-	Light brown	No odour	No sheen	HydraSleeve™
0861	MW042	30/10/2023	Walloon Coal Measures	CPSA W	24.0-30.0	29.045	21.635	40.036	18.401	Damaged	1.27	17476	7.00	138.1	24.0	-	Light grey, moderate	Organic odour	No sheen	HydraSleeveTM
0861	MW042	19/04/2024	Walloon Coal Measures	CPSA W	24.0-30.0	29.001	20.712	40.036	19.324	Damaged (gatic	0.57	15886	6.89	116.3	25.2	-	Black, high turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW043	28/04/2020	Walloon Coal Measures	CPSA W	18.0-21.0	21	14.634	49.182	34.548	Good	3.1	18800	6.57	219	17.8	Medium	Brown	No odour	No sheen	Hydrasleeve™
0861	MW043	16/10/2020	Walloon Coal Measures	CPSA W	18.0-21.0	20.63	14.658	49.182	34.524	Good	0.64	18408	7.23	-57.9	24.5	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW043	15/04/2021	Walloon Coal Measures	CPSA W	18.0-21.0	20.72	14.62	49.182	34.562	Good	0.64	22840	6.73	142.8	25.2	Low	Light Brown	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW043	26/10/2021	Walloon Coal Measures	CPSA W	18.0-21.0	20.63	14.48	49.182	34.702	Good	0.91	3070	7.6	295.4	26.5	Medium	Orange / brown	No odour	No sheen	Hydrasleeve™
0861	MW043	05/04/2022	Walloon Coal Measures	CPSA W	18.0-21.0	20.58	13.695	49.182	35.487	Good	0.47	7177	7.11	-108.3	96.7	25.5	Light yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW043	25/10/2022	Walloon Coal Measures	CPSA W	18.0-21.0	20.87	11.717	49.182	37.465	Good	1	17232	6.24	172.1	25.4	-	Green	No odour	No sheen	Hydrasleeve™
0861	MW043	27/04/2023	Walloon Coal Measures	CPSA W	18.0-21.0	20.803	12.685	49.182	36.497	Good	0.79	3506	6.75	106.7	23.9	-	Light brown	Organic odour	No sheen	HydraSleeve™
0861	MW043	30/10/2023	Walloon Coal Measures	CPSA W	18.0-21.0	20.627	11.665	49.182	37.517	Good	1.90	5335	6.74	171.6	24.8	-	Light brown, moderately	No odour	No sheen	HydraSleeveTM
0861	MW043	19/04/2024	Walloon Coal Measures	CPSA W	18.0-21.0	20.625	12.361	49.182	36.821	Good	0.57	7939	6.76	130.7	25.4	-	Brown, high turbid	Organic odour	No sheen	HydraSleeveTM
0861	MW044	22/04/2020	Alluvium	On-base Bremer River	8.0-11.0	11.085	8.864	20.311	11.447	Good	0.79	2247	7.55	205.5	22.8	Medium	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW044	15/10/2020	Alluvium	On-base Bremer River	8.0-11.0	11.18	9.099	20.311	11.212	Good	0.53	2418	7.02	-96.6	22.2	Turbid	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW044	21/04/2021	Alluvium	On-base Bremer River	8.0-11.0	11.25	8.883	20.311	11.428	Good	0.18	901	7.5	137.4	21.6	Medium	Brown	No odour	No sheen	Hydrasleeve™
0861	MW044	21/10/2021	Alluvium	On-base Bremer River	8.0-11.0	11.13	8.85	20.311	11.461	Good	1.19	981	7.14	238.4	25.3	Low	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW044	01/04/2022	Alluvium	On-base Bremer River	8.0-11.0	11.11	8.225	20.311	12.086	Good	0.54	334.8	6.98	-101.3	103.7	23.3	Light yellow / brown	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW044	26/10/2022	Alluvium	On-base Bremer River	8.0-11.0	11.11	7.944	20.311	12.367	Good	0.74	317.1	6.83	192.9	23	-	Grey	No odour	No sheen	Hydrasleeve™
0861	MW044	11/05/2023	Alluvium	On-base Bremer River	8.0-11.0	10.08	8.255	20.311	12.056	Good	0.62	332	6.85	114.4	23.5	-	Brown	Organic odour	No sheen	HydraSleeve™
0861	MW044	24/10/2023	Alluvium	On-base Bremer River	8.0-11.0	11.138	8.424	20.311	11.887	Good	1.58	2454	6.85	107.3	22.3	-	Light brown, low turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW044	18/04/2024	Alluvium	On-base Bremer River	8.0-11.0	11.138	8.389	20.311	11.922	Good	0.79	736	6.83	101.3	23.7	-	Brown, moderate turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW046	27/04/2020	Tertiary Formation	CPSA V	8.2-11.2	11.1	7.911	26.001	18.09	Good	0.45	3242	7.43	43	24.8	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW046	19/10/2020	Tertiary Formation	CPSA V	8.2-11.2	11.045	8.031	26.001	17.97	Good	0.37	3007	7.36	-77.6	26.2	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW046	20/04/2021	Tertiary Formation	CPSA V	8.2-11.2	11.10	7.813	26.001	18.188	Good	1.04	3308	7.55	141.3	25.2	Clear	Clear	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW046	26/10/2021	Tertiary Formation	CPSA V	8.2-11.2	-	7.875	26.001	18.126	Good	0.59	3072	7.21	236.5	23.8	Low	Light grey	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW046	30/03/2022	Tertiary Formation	CPSA V	8.2-11.2	11.04	7.32	26.001	18.681	Good	0.5	2295	7.17	-112.9	92.1	24.3	Light yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW046	25/10/2022	Tertiary Formation	CPSA V	8.2-11.2	11.02	7.165	26.001	18.836	Good	0.01	2255	6.92	122	24.5	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW046	17/04/2023	Tertiary Formation	CPSA V	8.2-11.2	11.072	7.89	26.001	18.111	Good	2.19	821	7.04	273.6	25.1	-	Light brown	Organic odour	No sheen	HydraSleeve™
0861	MW046	27/10/2023	Tertiary Formation	CPSA V	8.2-11.2	11.038	7.152	26.001	18.849	Good	0.95	1471	7.14	224.6	23.8	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW046	15/04/2024	Tertiary Formation	CPSA V	8.2-11.2	11.035	6.732	26.001	19.269	Damaged	0.87	617	7.16	70.6	26.9	-	Light grey, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW047	23/04/2020	Tertiary Formation	CPSA B	10.5-13.5	13.4	10.728	26.265	15.537	Damaged	0.62	3822	7.45	192.2	24.8	Medium	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW047	12/10/2020	Tertiary Formation	CPSA B	10.5-13.5	13.22	11.267	26.265	14.998	Damaged	0.1	5097	7.04	27.9	21.8	Medium	Clear	No odour	No sheen	Hydrasleeve™
0861	MW047	20/04/2021	Tertiary Formation	CPSA B	10.5-13.5	13.22	10.794	26.265	15.471	Damaged	0.54	6732	7.42	122.4	24.7	Clear	Clear	Organic odour	No sheen	Hydrasleeve™
0861	MW047	26/10/2021	Tertiary Formation	CPSA B	10.5-13.5	13.19	10.845	26.265	15.42	Damaged	0.5	1913	7.27	207.6	22.9	Low	Light grey	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW047	30/03/2022	Tertiary Formation	CPSA B	10.5-13.5	13.17	9.72	26.265	16.545	Good	0.74	2703	7.38	-147.3	57.7	23.9	Light yellow / brown	No odour	No sheen	Hydrasleeve™
0861	MW047	25/10/2022	Tertiary Formation	CPSA B	10.5-13.5	13.26	9.469	26.265	16.796	Good	0.47	1618	6.91	122.8	22.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW047	20/04/2023	Tertiary Formation	CPSA B	10.5-13.5	13.182	9.795	26.265	16.47	Good	0.73	832	7.1	257.7	24.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW047	26/10/2023	Tertiary Formation	CPSA B	10.5-13.5	13.203	11.163	26.265	15.102	Damaged	0.98	6478	6.45	149.5	25.4	-	Clear, low turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW047	15/04/2024	Tertiary Formation	CPSA B	10.5-13.5	13.201	10.153	26.265	16.112	Damaged (gatic	0.40	1878	6.81	50.8	24.8	-	Clear, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW048	24/04/2020	Alluvium	CPSA E	7.5-10.5	10.45	9.457	23.108	13.651	Good	3.77	614	6.59	205.7	28.4	Clear	Clear	No odour	No sheen	Hydrasleeve™
0861	MW048	12/10/2020	Alluvium	CPSA E	7.5-10.5	10.29	9.732	23.108	13.376	Good	2.96	450.8	7.48	450.4	22	Turbid	Brown	No odour	No sheen	Bailer
0861	MW048	16/04/2021	Alluvium	CPSA E	7.5-10.5	10.21	8.783	23.108	14.325	Good	1.25	351.8	6.42	421.2	22.8	Low	Light brown	No odour	No sheen	Hydrasleeve™
0861	MW048	21/10/2021	Alluvium	CPSA E	7.5-10.5	-	10.27	23.108	-	Good	1.68	262.9	6.62	247.8	21	Medium	Light brown	No odour	No sheen	Bailer. Water level below top of
0861	MW048	29/03/2022	Alluvium	CPSA E	7.5-10.5	10.23	7.07	23.108	16.038	Good	2.8	314.1	6.57	6.5	211.5	22	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW048	25/10/2022	Alluvium	CPSA E	7.5-10.5	10.25	7.138	23.108	15.97	Good	1.08	622	6.32	164	22.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW048	17/04/2023	Alluvium	CPSA E	7.5-10.5	10.245	8.32	23.108	14.788	Good	2.06	532	5.32	349.5	23.4	-	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW048	26/10/2023	Alluvium	CPSA E	7.5-10.5	10.238	8.860	23.108	14.248	Good	2.22	899	6.49	368.8	22.5	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW048	19/04/2024	Alluvium	CPSA E	7.5-10.5	10.235	8.216	23.108	14.892	Good	1.20	324	6.52	147.1	23.3	-	Grey, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW049	24/04/2020	Alluvium	CPSA DD	7.5-10.5	10.4	8.99	22.044	13.054	Good	2.06	1089	6.65	160.6	28	Low	Light brown	Sulfuric odour	No sheen	Hydrasleeve™
0861	MW049	12/10/2020	Alluvium	CPSA DD	7.5-10.5	10.28	9.205	22.044	12.839	Good	1.13	1032	6.81	47	23.9	Medium	Clear	Slight organic odour	No sheen	Hydrasleeve™
0861	MW049	20/04/2021	Alluvium	CPSA DD	7.5-10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Not sampled- well not located
0861	MW049	21/10/2021	Alluvium	CPSA DD	7.5-10.5	-	10.29	-	-	Good	0.63	956	6.61	183.2	21.6	Low	Light yellow	No odour	No sheen	Bailer. Water level below top of
0861	MW049	07/04/2022	Alluvium	CPSA DD	7.5-10.5	10.26	8.065	22.044	13.979	Good	0.41	332.5	6.54	-93.9	111.1	21.7	Clear	No odour	No sheen	Hydrasleeve™
0861	MW049	25/10/2022	Alluvium	CPSA DD	7.5-10.5	10.26	7.787	22.044	14.257	Good	2.43	440.2	6.58	160.2	22.9	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW050	24/04/2020	Alluvium	CPSA G	11.5-14.5	14.5	11.09	24.317	13.227	Damaged	5.36	1943	7.22	167.8	28.3	Low	Light yellow	Organic odour	No sheen	Hydrasleeve™
0861	MW050	12/10/2020	Alluvium	CPSA G	11.5-14.5	-	11.406	24.317	12.911	Damaged	0.67	1487	7.23	-133.2	23.3	Clear	Clear	Slight organic odour	No sheen	Hydrasleeve™
0861	MW050	21/04/2021	Alluvium	CPSA G	11.5-14.5	14.2	11.195	24.317	13.122	Damaged	2.01	641	7.53	241.6	23.4	Medium	Brown	No odour	No sheen	Hydrasleeve™
0861	MW050	28/10/2021	Alluvium	CPSA G	11.5-14.5	14.39	11.15	24.317	13.167	Damaged	1.59	1078	6.83	368.3	27.1	Low	Light grey	No odour	No sheen	Hydrasleeve™
0861	MW050	30/03/2022	Alluvium	CPSA G	11.5-14.5	14.31	10.01	24.317	14.307	Good	0.82	1524	7.08	-118.5	86.5	23.7	Light yellow	No odour	No sheen	Hydrasleeve™
0861	MW050	24/10/2022	Alluvium	CPSA G	11.5-14.5	14.31	10.01	24.317	14.307	Good	5.37	436.1	6.66	121.9	23.8	-	Clear	No odour	No sheen	Hydrasleeve™
0861	MW050	17/04/2023	Alluvium	CPSA G	11.5-14.5	14.368	10.08	24.317	14.237	Damaged	1.11	410.4	6.13	301.3	25.1	-	Brown	No odour	No sheen	HydraSleeve™
0861	MW050	27/10/2023	Alluvium	CPSA G	11.5-14.5	14.424	11.493	24.317	12.824	Damaged	1.16	521	7.15	127.2	21.3	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW050	19/04/2024	Alluvium	CPSA G	11.5-14.5	14.421	8.769	24.317	15.548	Damaged	0.76	595	6.98	137.9	24.1	-	Brown, high turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW054D	24/04/2020	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	21.2	6.236	20.454	14.218	Good	3.76	1333	7.15	200	27.9	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW054D	23/10/2020	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	20.96	6.402	24.317	17.915	Good	0.54	1110	7.23	-101.3	23.1	Low	Clear	No odour	No sheen	Hydrasleeve™
0861	MW054D	21/04/2021	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	21.00	6.311	24.317	18.006	Good	0.37	318	6.69	182.5	23.1	Medium	Brown	No odour	No sheen	Hydrasleeve™

TABLE A1: Groundwater Parameters

Property ID	Well ID	Sample Date	Aquifer	AOC	Screen depth (m)	Well Depth (mbtoc)	Depth to Water (mbtoc)	TOC Elevation (mAHD)	Ground- water Elevation (mAHD)	Condition of Well	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)	Temp (°C)	Turbidity	Water Colour	Odour	Sheen	Sample Method / Comments
0861	MW054D	28/10/2021	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	20.93	6.27	24.317	18.047	Good	0.35	279.2	6.95	157.7	27	Clear	Clear	No odour	No sheen	HydraSleeve™
0861	MW054D	05/04/2022	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	20.79	5.315	20.454	15.139	Good	0.23	321.1	6.43	-88.8	116.2	26	Light yellow	No odour	No sheen	HydraSleeve™
0861	MW054D	09/11/2022	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	21.06	5.236	20.454	15.218	Good	1.7	561	6.33	218.3	22.5	-	Brown	No odour	No sheen	HydraSleeve™
0861	MW054D	26/04/2023	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	20.715	5.434	20.454	15.02	Good	0.13	361.9	6.8	234.7	22.9	-	Pale brown	No odour	No sheen	HydraSleeve™
0861	MW054D	26/10/2023	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	20.952	5.667	20.454	14.787	Good	1.30	875	6.97	133.4	22.9	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW054D	15/04/2024	Walloon Coal Measures	Off-base Warril Creek	18.0-21.0	20.951	5.538	20.454	14.916	Good	0.55	272	6.82	72.9	23.0	-	Grey, high turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW054S	24/04/2020	Alluvium	Off-base Warril Creek	4.0-7.0	6.93	6.734	24.317	17.583	Good	1.4	3055	6.85	61.7	23	Turbid	Brown	-	-	Not sampled
0861	MW054S	24/04/2020	Alluvium	Off-base Warril Creek	4.0-7.0	6.9	6.456	20.38	13.924	Good	2.62	3188	6.89	206.2	27.8	Turbid	Brown	No odour	No sheen	HydraSleeve™
0861	MW054S	21/04/2021	Alluvium	Off-base Warril Creek	4.0-7.0	6.92	6.579	24.317	17.738	Good	-	-	-	-	-	-	-	-	-	Insufficient water
0861	MW054S	28/10/2021	Alluvium	Off-base Warril Creek	4.0-7.0	6.89	6.53	24.317	17.787	Good	1.19	4768	6.79	272	23.7	Turbid	Brown	No odour	No sheen	HydraSleeve™
0861	MW054S	05/04/2022	Alluvium	Off-base Warril Creek	4.0-7.0	6.9	4.895	20.38	15.485	Good	0.77	2834	6.75	-83	122	24.3	Light yellow	No odour	No sheen	HydraSleeve™
0861	MW054S	09/11/2022	Alluvium	Off-base Warril Creek	4.0-7.0	6.92	4.704	20.38	15.676	Good	1.9	2771	6.69	229.5	21.4	-	Clear	No odour	No sheen	HydraSleeve™
0861	MW054S	26/04/2023	Alluvium	Off-base Warril Creek	4.0-7.0	6.895	5.347	20.38	15.033	Good	-	3522	6.93	250.8	23.8	-	Pale brown	No odour	No sheen	HydraSleeve™
0861	MW054S	26/10/2023	Alluvium	Off-base Warril Creek	4.0-7.0	6.895	5.748	20.380	14.632	Good	1.34	3745	6.74	214.5	23.4	-	reamy, moderate to high	Organic odour	No sheen	HydraSleeveTM
0861	MW054S	16/04/2024	Alluvium	Off-base Warril Creek	4.0-7.0	6.890	5.386	20.380	14.994	Good	1.96	3414	6.72	75.8	23.2	-	Black, high turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW055D	22/04/2020	Walloon Coal Measures	On-base Bremer River	28.0-34.0	31.5	8.923	22.196	13.273	Good	0.29	6538	7.63	131.8	21.7	Low	Light brown	No odour	No sheen	HydraSleeve™
0861	MW055D	14/10/2020	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.8	8.846	24.317	15.471	Good	1.39	6109	7.32	-70.9	22.9	Clear	Clear	No odour	No sheen	HydraSleeve™
0861	MW055D	16/04/2021	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.94	8.836	24.317	15.481	Good	0.54	7069	7.41	242.4	22	Clear	Clear	No odour	No sheen	HydraSleeve™
0861	MW055D	21/10/2021	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.84	8.751	24.317	15.566	Good	0.46	7526	7.44	162.9	22.4	Clear	Clear	Sulfuric odour	No sheen	HydraSleeve™
0861	MW055D	01/04/2022	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.79	8.14	22.196	14.056	Good	0.64	55033	7.35	-91.3	113.7	24.5	Clear	No odour	No sheen	HydraSleeve™
0861	MW055D	20/10/2022	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.44	7.885	22.196	14.311	Good	1.61	7729	7	163.5	22.1	-	Clear	No odour	No sheen	HydraSleeve™
0861	MW055D	11/05/2023	Walloon Coal Measures	On-base Bremer River	28.0-34.0	32.56	8.152	22.196	14.044	Good	0.81	5120	7.42	121.2	22.4	-	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW055D	24/10/2023	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.830	8.357	22.196	13.839	Good	2.04	7180	7.31	117.1	23.8	-	Clear, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW055D	16/04/2024	Walloon Coal Measures	On-base Bremer River	28.0-34.0	33.829	8.449	22.196	13.747	Good	1.05	65	7.21	107.9	21.7	-	Black, moderate turbidity	No odour	No sheen	HydraSleeveTM
0861	MW055S	22/04/2020	Alluvium	On-base Bremer River	9.0-12.0	11.8	9.2	22.14	12.94	Good	0.31	2663	7.4	183.1	21.1	Low	Light brown	No odour	No sheen	HydraSleeve™
0861	MW055S	14/10/2020	Alluvium	On-base Bremer River	9.0-12.0	11.69	9.817	24.317	14.7	Good	1.51	2944	7.86	6.5	22	Clear	Clear	Slight organic odour	No sheen	HydraSleeve™
0861	MW055S	16/04/2021	Alluvium	On-base Bremer River	9.0-12.0	10.62	8.897	24.317	15.42	Good	0.22	1275	6.98	232.1	22.7	Clear	Clear	No odour	No sheen	HydraSleeve™
0861	MW055S	21/10/2021	Alluvium	On-base Bremer River	9.0-12.0	-	8.831	24.317	15.486	Good	2.38	1631	7.07	174.7	22	Clear	Light yellow	Slight organic odour	No sheen	HydraSleeve™
0861	MW055S	01/04/2022	Alluvium	On-base Bremer River	9.0-12.0	11.57	7.635	22.14	14.505	Good	0.33	1155	6.72	-76.3	126.7	23.7	Clear	No odour	No sheen	HydraSleeve™
0861	MW055S	20/10/2022	Alluvium	On-base Bremer River	9.0-12.0	11.72	7.412	22.14	14.728	Good	4.79	682	7.13	217.4	21.6	-	Clear	No odour	No sheen	HydraSleeve™
0861	MW055S	11/05/2023	Alluvium	On-base Bremer River	9.0-12.0	10.49	8.483	22.14	13.657	Good	0.35	1105	6.72	128.4	23.3	-	Clear, non-turbid	No odour	No sheen	HydraSleeve
0861	MW055S	24/10/2023	Alluvium	On-base Bremer River	9.0-12.0	11.586	8.806	22.140	13.334	Good	1.30	4015	6.70	123.0	24.5	-	Yellowish, moderate	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW055S	16/04/2024	Alluvium	On-base Bremer River	9.0-12.0	11.582	8.139	22.140	14.001	Good	1.69	3659	6.71	115.1	22.2	-	Black, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW056D	22/04/2020	Tertiary Formation	Off-base Bremer River	15.0-18.0	17.7	7.012	14.762	7.75	Good	0.41	6193	7.28	111.5	24.4	Clear	Clear	No odour	No sheen	HydraSleeve™
0861	MW056D	15/10/2020	Tertiary Formation	Off-base Bremer River	15.0-18.0	19.8	7.811	14.762	6.951	Good	0.23	7639	6.77	-98.1	27.2	Turbid	Black	-	-	HydraSleeve™
0861	MW056I	15/04/2021	Tertiary Formation	Off-base Bremer River	15.0-18.0	17.7	9.598	14.762	5.164	Good	0.47	1903	7.23	305.7	24.2	Clear	Clear	Slight organic odour	No sheen	HydraSleeve™
0861	MW056I	22/10/2021	Tertiary Formation	Off-base Bremer River	15.0-18.0	-	9.44	14.762	5.322	Good	0.75	4248	6.83	205.6	24.6	Low	Clear	Organic odour	No sheen	HydraSleeve™
0861	MW056I	29/03/2022	Tertiary Formation	Off-base Bremer River	15.0-18.0	18.00	4.95	14.762	9.812	Good	0.63	405.6	6.83	-41	164	22	Light grey	Weak Septic	No sheen	HydraSleeve™
0861	MW056I	18/04/2023	Tertiary Formation	Off-base Bremer River	15.0-18.0	18.8	6.032	14.762	8.73	Good	0.46	368	7.34	243.5	22	-	Light brown, low turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW056I	26/10/2023	Tertiary Formation	Off-base Bremer River	15.0-18.0	17.745	6.508	14.762	8.254	Good	1.56	597	7.02	227.6	26.4	-	Light brown, low turbidity	No odour	No sheen	HydraSleeveTM
0861	MW056I	16/04/2024	Tertiary Formation	Off-base Bremer River	15.0-18.0	17.741	6.081	14.762	8.681	Good	0.36	327	7.21	243.8	21.6	-	Brown, moderate turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW056S	22/04/2020	Alluvium	Off-base Bremer River	6.5-9.5	9.455	7.309	15.078	7.769	Good	1.42	8385	7.09	213.6	29	Low	Clear	No odour	No sheen	HydraSleeve™
0861	MW056S	15/10/2020	Alluvium	Off-base Bremer River	6.5-9.5	9.45	7.751	15.078	7.327	Good	0.4	5247	7.01	-114.1	25.6	-	Clear	Slight organic odour	No sheen	HydraSleeve™
0861	MW056S	15/04/2021	Alluvium	Off-base Bremer River	6.5-9.5	9.42	6.935	15.078	8.143	Good	1.49	4010	7.05	131.3	22.9	Low	Clear	No odour	No sheen	HydraSleeve™
0861	MW056S	22/10/2021	Alluvium	Off-base Bremer River	6.5-9.5	-	6.803	15.078	8.275	Good	1.11	3533	7	203.7	25.4	Low	Clear	No odour	No sheen	HydraSleeve™
0861	MW056S	29/03/2022	Alluvium	Off-base Bremer River	6.5-9.5	9.50	5.295	15.078	9.783	Good	0.63	405.6	6.83	-61.9	143.1	22.4	Light grey	Weak Septic	No sheen	HydraSleeve™
0861	MW056S	26/10/2023	Alluvium	Off-base Bremer River	6.5-9.5	9.445	6.852	23.140	16.288	Good	1.83	6382	6.65	237.7	24.6	-	Clear, high turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW056S	16/04/2024	Alluvium	Off-base Bremer River	6.5-9.5	9.444	5.734	15.078	9.344	Good	1.14	5506	6.63	88.0	21.3	-	Black, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW057I	28/04/2020	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.6	6.789	16.494	9.705	Good	5.1	1337	7.32	109.8	17.8	Low	Light yellow	Organic odour	No sheen	HydraSleeve™
0861	MW057I	15/10/2020	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.46	7.886	16.494	8.608	Good	1.7	1545	7.19	0.9	22.7	Turbid	Light brown	No odour	No sheen	HydraSleeve™
0861	MW057I	21/04/2021	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.5	6.503	16.494	9.991	Good	-	-	-	-	-	-	-	Slight organic odour	No sheen	HydraSleeve™
0861	MW057I	22/10/2021	Tertiary Formation	Off-base Warril Creek	12.5-15.5	16.5	6.26	16.494	10.234	Good	0.56	844	7.12	128	26.1	Low	Light yellow	No odour	No sheen	HydraSleeve™
0861	MW057I	04/04/2022	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.445	5.41	16.494	11.084	Good	0.91	418.6	6.99	-96.8	108.2	23.7	Light yellow	Sulfuric odour	No sheen	HydraSleeve™
0861	MW057I	26/10/2022	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.44	5.52	16.494	10.974	Good	3.31	513.9	6.95	182.1	22.3	-	Grey	No odour	No sheen	HydraSleeve™
0861	MW057I	19/04/2023	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.442	5.672	16.494	10.822	Good	0.5	682	7.06	212.4	22.1	Medium	Yellow / brown	No odour	No sheen	HydraSleeve™
0861	MW057I	03/05/2024	Tertiary Formation	Off-base Warril Creek	12.5-15.5	15.500	5.685	16.494	10.809	Good	1.01	394	6.68	189.2	21.6	-	Yellow, low-moderate	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW057S	28/04/2020	Alluvium	Off-base Warril Creek	5.5-8.5	8.5	7.265	16.479	9.214	Good	0.67	523	8.99	118.9	22.4	Low	Light yellow	Organic odour	No sheen	HydraSleeve™
0861	MW057S	15/10/2020	Alluvium	Off-base Warril Creek	5.5-8.5	8.49	6.874	16.479	9.605	Good	0.94	1422	7.15	-91.5	23	Low	Clear	No odour	No sheen	HydraSleeve™
0861	MW057S	21/04/2021	Alluvium	Off-base Warril Creek	5.5-8.5	8.5	7.025	16.479	9.454	Good	1.2	475.9	6.39	223.2	20.2	Medium	Brown	No odour	No sheen	HydraSleeve™
0861	MW057S	22/10/2021	Alluvium	Off-base Warril Creek	5.5-8.5	8.48	6.98	16.479	9.499	Good	0.45	891	6.72	130.7	25.8	Low	Light yellow	No odour	No sheen	Bailer
0861	MW057S	04/04/2022	Alluvium	Off-base Warril Creek	5.5-8.5	8.45	4.50	16.479	11.979	Good	1.26	613	6.90	-110.2	94.8	23.4	Clear	No odour	No sheen	HydraSleeve™
0861	MW057S	26/10/2022	Alluvium	Off-base Warril Creek	5.5-8.5	8.41	3.992	16.479	12.487	Good	0.03	1622	7.03	177.9	21.8	-	Grey	No odour	No sheen	HydraSleeve™
0861	MW057S	19/04/2023	Alluvium	Off-base Warril Creek	5.5-8.5	8.44	5.692	16.479	10.787	Good	0.5	1556	6.94	233.3	23.3	Medium	Pale brown	No odour	No sheen	HydraSleeve™
0861	MW057S	03/05/2024	Alluvium	Off-base Warril Creek	5.5-8.5	8.410	5.400	16.479	11.079	Good	1.06	942	6.56	197.0	21.5	-	Yellow, low-moderate	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW309	27/04/2020	Tertiary Formation	CPSA M	13.0-19.0	19.7	10.95	28.607	17.657	Good	0.33	10723	6.91	105.5	25.1	Medium	Yellow / brown	Organic odour	No sheen	HydraSleeve™
0861	MW309	13/10/2020	Tertiary Formation	CPSA M	13.0-19.0	19.35	11.035	28.607	17.572	Good	0.62	9703	7.09	-88.1	24	Medium	Clear	Sulfuric odour	No sheen	HydraSleeve™
0861	MW309	20/04/2021	Tertiary Formation	CPSA M	13.0-19.0	19.3	10.981	28.607	17.626	Good	0.6	12844	6.87	163	26.4	Clear	Clear	No odour	No sheen	HydraSleeve™
0861	MW309	26/10/2021	Tertiary Formation	CPSA M	13.0-19.0	19.3	10.955	28.607	17.652	Good	1.96	7163	6.88	284.5	24.2	Low	Grey	No odour	No sheen	HydraSleeve™
0861	MW309	30/03/2022	Tertiary Formation	CPSA M	13.0-19.0	19.2	10.685	28.607	17.922	Good	0.27	10890	6.60	-73.6	131.4	25.4	Grey	No odour	No sheen	HydraSleeve™
0861	MW309	25/10/2022	Tertiary Formation	CPSA M	13.0-19.0	19.39	10.605	28.607	18.002	Good	1.5	14064	6.46	142.8	25.4	-	Clear	No odour	No sheen	HydraSleeve™
0861	MW309	20/04/2023	Tertiary Formation	CPSA M	13.0-19.0	19.288	10.524	28.607	18.083	Good	0.79	793	8.17	318.2	23.9	-	Light brown, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW309	27/10/2023	Tertiary Formation	CPSA M	13.0-19.0	19.296	11.409	28.607	17.198	Good	2.49	10415	6.79	276.2	21.6	-	Clear, non-turbid	No odour	No sheen	HydraSleeveTM
0861	MW309	15/04/2024	Tertiary Formation	CPSA M	13.0-19.0	19.295	10.328	28.607	18.279	Good	3.54	2341	7.16	125.4	25.9	-	Cloudy, moderate turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW535	11/07/2024	Alluvium	CPSA A	8.5-13.5	13.500	8.900	25.331	16.430	Good	3.46	2147	7.12	341.2	21.8	-	Clear, pale yellow	None	None	HydraSleeveTM
0861	MW536	11/07/2024	Alluvium	CPSA A	6.5-10.5	10.500	7.700	25.170	17.470	Good	3.12	2675	7.42	334.9	21.4	-	Clear, pale yellow	None	None	HydraSleeveTM
0861	MW537	11/07/2024	Tertiary Formation	CPSA Y	15-19	19.000	15.050	34.781	19.730	Good	3.02	25997	6.38	398.6	23.5	-	Clear, no colour	None	None	HydraSleeveTM
0861	MW538	11/07/2024	Alluvium	CPSA A	13.5-17	17.000	11.900	25.218	13.320	Good	2.26	16178	6.14	387.2	22.8	-	Clear, no colour	None	None	HydraSleeveTM
0861	MW539	11/07/2024	Tertiary Formation	CPSA A	12-15	17.500	10.900	30.288	19.390	Good	6.04	4717	6.29	361.3	22.7	-	Clear, pale yellow	None	None	HydraSleeveTM

Notes:
All Hydrasleeves™ were installed a minimum of 24 hours prior to sampling m - metres
m btoc - metres below top of casing
m AHD - metres above Australian Height Datum TOC - Top of Casing
DO - Dissolved Oxygen EC - Electrical Conductivity
Eh - Corrected Oxidation Reduction Potential (correction factor of +205 applied, based on a YSI with Ag/AgCl sensor calibrated to a 3.5 molar KCL solution)
'-' no data
mg/L - milligrams per litre
µS/cm - microsiemens per centimetre mV - millivolts
°C - degrees Celsius

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water															0.56						
PFAS NEMP 2020 Freshwater 95%								0.13							220						
PFAS NEMP 2020 Freshwater 99%								0.00023							19						
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFASMP	MW002	8/02/2018	EB1803867	<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	<0.12
QLD_0861_PFAS	MW002	20/11/2019	EB1931427	<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	<13.8	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW002	21/04/2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW002	21/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	**0.097**	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW002	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW002	13/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW002	21/10/2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW002	21/10/2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW002	21/10/2021	RN1333717	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW002	31/03/2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW002	26/10/2022	EB2231825	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW002	22/05/2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW002	23/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW002	19/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	**0.02**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW005	17/12/2008	EB0817911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220058	-	-	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	EB1226948	-	-	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	EB1226948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	356076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	11/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	11/02/2013	EB1303337	-	-	-	-	**0.05**	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	27/08/2013	EB1320742	-	-	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	28/02/2017	EB1703884	<0.02	<0.02	**0.02**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW005	12/10/2017	EB1721110	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW005	7/05/2019	EB1911948	<0.02	<0.02	**0.06**	<0.02	**0.35**	-	<0.02	<0.1	<0.02	**0.03**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW005	7/05/2019	EB1911948	<0.02	<0.02	**0.06**	<0.02	**0.23**	-	<0.02	<0.1	<0.02	**0.03**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW005	7/05/2019	217521	<0.01	<0.01	**0.07**	<0.01	**0.33**	-	<0.02	<0.02	<0.02	**0.03**	<0.01	**0.02**	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW005	19/11/2019	EB1931427	<0.02	<0.02	<0.02	<0.02	**0.08**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	23/04/2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.3	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	16/10/2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	16/10/2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	16/10/2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW005	21/04/2021	EB2111121	<0.02	<0.02	**0.04**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	27/10/2021	EB2130850	<0.02	<0.02	**0.04**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	6/04/2022	EB2209951	<0.02	<0.02	**0.05**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW005	24/10/2022	EB2231825	<0.02	<0.02	**0.04**	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW005	21/04/2023	EB2312062-AA	<0.02	<0.02	**0.05**	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW005	28/10/2023	EB2333887-AA	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW005	28/10/2023	RN1410504	<0.01	<0.01	**0.037**	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW005	30/10/2023	EB2333894-AA	<0.02	<0.02	**0.04**	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW005	15/04/2024	EB2413910	<0.02	<0.02	**0.06**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW006	17/12/2008	EB0817911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220053	-	-	-	-	**44.8**	-	-	-	-	-	-	**10.9**	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	15/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	15/10/2012	EB1226844	-	-	-	-	**49.9**	-	-	-	-	-	-	**5.56**	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	16/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	22/01/2013	EB1301359	-	-	-	-	**106**	-	-	-	-	-	-	**9.91**	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	27/08/2013	EB1320742	-	-	-	-	**315**	-	-	-	-	-	-	**7.85**	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	21/02/2017	EB1703368	**3.76**	**2.68**	**20.5**	**2.07**	**152**	-	<0.02	**0.6**	**1.97**	**6.43**	**0.67**	**2.44**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW006	21/02/2017	EB1703368	**3.93**	**2.76**	**29.9**	**2.2**	**157**	-	<0.02	**0.5**	**1.9**	**6.38**	**0.61**	**2.46**	**0.05**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW006	21/02/2017	535101	**1.9**	-	**21**	-	**190**	-	<0.3	<1.5	**1.1**	**5.4**	**0.85**	**2.2**	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
QLD_Hist_202012-3	MW006	10/10/2017	EB1720882	**1.77**	**2.01**	**23.2**	**1.81**	**144**	-	<0.02	**1**	**1.64**	**6.31**	**1**	**1.95**	**0.1**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW006	13/05/2019	EB1912390	**0.98**	**0.97**	**9.58**	**0.73**	**66.5**	-	<0.02	**0.7**	**1.33**	**2.96**	**0.54**	**0.98**	**0.08**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW006	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW006	3/12/2019	EB1932627	**1.00**	**0.92**	**8.15**	**0.83**	**80.7**	-	<0.24	<1.2	**0.85**	**2.55**	**0.49**	**0.75**	<0.24	<0.24	<0.24	<0.73	<0.24	<0.61
QLD_0861_PFASOMP	MW006	22/04/2020	EB2011246-AC	**0.9**	**0.94**	**7.6**	**0.52**	**49.8**	-	<0.16	<0.8	**1.16**	**2.44**	**0.45**	**0.79**	<0.16	<0.16	<0.16	<0.16	<0.16	<0.4
QLD_0861_PFASOMP	MW006	22/04/2020	EB2011246-AC	**1.09**	**0.93**	**8.27**	**0.6**	**55.9**	-	<0.16	<0.8	**1.47**	**2.54**	**0.5**	**0.92**	<0.16	<0.16	<0.16	<0.16	<0.16	<0.4
QLD_0861_PFASOMP	MW006	22/04/2020	RN1274652	**0.93**	**0.82**	**5.8**	**0.63**	**36**	**0.079**	<0.01	**0.69**	**1.4**	**2.3**	**0.51**	**0.85**	**0.066**	**0.012**	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW006	21/10/2020	EB2027539	**1.24**	**1.03**	**8.61**	**0.52**	**45.4**	-	<0.08	**0.7**	**1.41**	**3.22**	**0.61**	**1.03**	<0.08	<0.08	<0.08	<0.08	<0.08	<0.20
QLD_0861_PFASOMP	MW006	21/10/2020	EB2027539	**0.95**	**1.08**	**8.39**	**0.46**	**47.9**	-	<0.17	**0.9**	**1.45**	**2.98**	**0.60**	**0.96**	<0.17	<0.17	<0.17	<0.17	<0.17	<0.43
QLD_0861_PFASOMP	MW006	21/10/2020	RN1292508	**0.88**	**0.73**	**6.6**	**0.39**	**43**	**0.046**	<0.01	**0.65**	**1.3**	**2**	**0.46**	**0.72**	**0.063**	**0.01**	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW006	21/04/2021	EB2111121	**1.16**	**1.63**	**7.67**	**0.99**	**47.4**	-	<0.02	**0.6**	**1.80**	**3.42**	**0.76**	**1.07**	**0.07**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW006	27/10/2021	EB2130850	**1.44**	**1.12**	**8.72**	**0.44**	**44.0**	-	<0.10	**0.5**	**1.80**	**3.89**	**0.59**	**1.00**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW006	7/04/2022	EB2209951	**1.82**	**1.83**	**10.5**	**0.45**	**42.0**	-	<0.05	**0.8**	**2.11**	**3.79**	**0.75**	**1.03**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW006	26/10/2022	EB2231825	**2.05**	**1.80**	**12.9**	**0.62**	**43.8**	-	<0.05	**0.7**	**1.94**	**5.06**	**0.74**	**1.05**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP_23	MW006	26/04/2023	EB2312761-AA	**2.50**	**2.25**	**13.2**	**0.56**	**42.0**	-	<0.05	**1.0**	**2.44**	**5.00**	**0.77**	**0.99**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP_23	MW006	29/11/2023	EB2337879-AA	**2.62**	**2.26**	**13.5**	**0.43**	**34.6**	-	<0.10	<0.5	**1.90**	**4.62**	**0.81**	**1.21**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.24
QLD_0861_PFASOMP_24	MW006	18/04/2024	EB2413910	**3.20**	**2.96**	**20.2**	**0.71**	**48.4**	-	<0.10	**0.9**	**2.15**	**6.40**	**0.97**	**1.51**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_Hist_202012-3	MW007	17/12/2008	EB0817911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219768	-	-	-	-	**99.1**	-	-	-	-	-	-	**2.71**	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219769	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219816	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219816	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	15/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	15/10/2012	EB1226844	-	-	-	-	**67.8**	-	-	-	-	-	-	**2.48**	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	16/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	22/01/2013	EB1301359	-	-	-	-	**161**	-	-	-	-	-	-	**3.12**	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	27/08/2013	EB1320742	-	-	-	-	**122**	-	-	-	-	-	-	**2.08**	-	-	-	-	-	-

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water															0.56						
PFAS NEMP 2020 Freshwater 95%								0.13							220						
PFAS NEMP 2020 Freshwater 99%								0.00023							19						
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_Hist_202012-3	MW007	22/02/2017	EB1703481	**2.36**	**2.37**	**21**	**2.04**	**88.4**	-	<0.02	**1.7**	**0.92**	**3.88**	**0.62**	**2**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW007	11/10/2017	EB1721001	**2.5**	**2.34**	**16.6**	**1.64**	**56.7**	-	<0.02	**0.4**	**0.66**	**3.09**	**0.6**	**1.09**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW007	12/10/2017	EB1721110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	12/10/2017	EB1721110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW007	13/05/2019	EB1912390	**1.51**	**1.84**	**14.5**	**1.62**	**35.2**	-	<0.02	**0.1**	**0.63**	**2.77**	**0.46**	**1.23**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW007	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW007	13/05/2019	EB1912390	**1.54**	**1.87**	**14.7**	**1.68**	**36.5**	-	<0.02	**0.1**	**0.64**	**2.77**	**0.47**	**1.23**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW007	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_FSBGME	MW007	25/06/2019	662866	**1.3**	**1.5**	**17**	**1.2**	**81**	<0.01	<0.01	**0.32**	**0.51**	**3.9**	**0.48**	**1.2**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
QLD_0861_PFAS	MW007	3/12/2019	232657	**2.0**	**1.9**	**18**	**1.8**	**33**	-	<0.02	**0.53**	**0.78**	**3.2**	**0.59**	**1.4**	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW007	3/12/2019	EB1932627	**1.50**	**1.76**	**14.2**	**1.67**	**35.6**	-	<0.24	<1.2	**0.36**	**2.46**	**0.43**	**0.95**	<0.24	<0.24	<0.24	<1.06	<0.24	<0.60
QLD_0861_PFAS	MW007	3/12/2019	EB1932627	**1.75**	**2.22**	**17.2**	**1.89**	**38.9**	-	<0.02	**0.4**	**0.70**	**3.33**	**0.52**	**1.43**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW007	28/04/2020	EB2011562	**2.06**	**2.00**	**16.6**	**1.59**	**35.2**	-	<0.06	<0.3	**0.73**	**3.13**	**0.53**	**1.37**	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16
QLD_0861_PFASOMP	MW007	19/10/2020	EB2027539	**2.38**	**2.45**	**19.7**	**1.31**	**28.0**	-	<0.04	**0.5**	**0.76**	**3.94**	**0.66**	**1.47**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.10
QLD_0861_PFASOMP	MW007	19/10/2020	EB2027539	**2.14**	**2.32**	**17.2**	**1.29**	**27.2**	-	<0.20	<1.0	**0.79**	**3.69**	**0.65**	**1.37**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50
QLD_0861_PFASOMP	MW007	19/10/2020	RN1292508	**1.7**	**1.6**	**15**	**1.1**	**24**	<0.01	<0.01	**0.47**	**0.67**	**2.5**	**0.46**	**1**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW007	19/04/2021	EB2111121	**2.00**	**2.87**	**15.6**	**1.83**	**32.8**	-	<0.02	**0.5**	**0.80**	**3.71**	**0.57**	**1.26**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW007	27/10/2021	EB2130850	**2.13**	**2.36**	**19.5**	**1.41**	**33.9**	-	<0.04	**0.4**	**0.85**	**3.81**	**0.59**	**1.35**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.09
QLD_0861_PFASOMP	MW007	27/10/2021	EB2130850	**2.04**	**2.54**	**18.1**	**1.40**	**33.6**	-	<0.04	**0.4**	**0.81**	**3.90**	**0.57**	**1.37**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.11
QLD_0861_PFASOMP	MW007	27/10/2021	RN1333717	**1.6**	**1.7**	**13**	**0.96**	**19**	<0.01	<0.01	**0.45**	**0.63**	**2.3**	**0.39**	**0.85**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW007	6/04/2022	EB2209951	**0.19**	**0.18**	**1.26**	**0.11**	**4.69**	-	<0.02	<0.1	**0.08**	**0.27**	**0.05**	**0.11**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW007	26/10/2022	EB2231825	**1.50**	**1.70**	**10.6**	**0.50**	**5.78**	-	<0.02	**0.3**	**0.53**	**2.95**	**0.42**	**0.69**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW007	21/04/2023	EB2312062-AA	**1.84**	**1.97**	**13.3**	**0.80**	**8.88**	-	<0.02	**0.4**	**0.67**	**2.85**	**0.46**	**0.82**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP_23	MW007	29/11/2023	EB2337879-AA	**1.47**	**1.30**	**9.51**	**0.79**	**11.6**	-	<0.02	**0.2**	**0.54**	**1.96**	**0.39**	**0.84**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP_24	MW007	18/04/2024	EB2413910	**1.46**	**1.61**	**13.1**	**0.90**	**20.8**	-	<0.05	**0.4**	**0.59**	**2.51**	**0.44**	**0.98**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_Hist_202012-3	MW008	17/12/2008	EB0817911																		
QLD_Hist_202012-3	MW008	26/07/2012	EB1219768					**0.19**							0.02						
QLD_Hist_202012-3	MW008	26/07/2012	EB1219769																		
QLD_Hist_202012-3	MW008	26/07/2012	EB1219816																		
QLD_Hist_202012-3	MW008	15/10/2012	EB1226401																		
QLD_Hist_202012-3	MW008	15/10/2012	EB1226844					<0.02							<0.02						
QLD_Hist_202012-3	MW008	16/01/2013	EB1301014																		
QLD_Hist_202012-3	MW008	22/01/2013	EB1301359					<0.02							<0.02						
QLD_Hist_202012-3	MW008	26/08/2013	EB1320549					<0.02							<0.02						
QLD_0861_PFAS	MW008	16/01/2018	EB1802042	<0.02	<0.02	0.06	<0.02	**0.08**		<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW008	1/05/2019	EB1911342	<0.02	<0.02	<0.02	<0.02	<0.01		<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW009	17/12/2008	EB0817911																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219635																		
QLD_Hist_202012-3	MW009	25/07/2012	345940																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219635					**2.65**							**0.28**						
QLD_Hist_202012-3	MW009	25/07/2012	EB1219644																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219646																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219646																		
QLD_Hist_202012-3	MW009	15/10/2012	EB1226401																		
QLD_Hist_202012-3	MW009	15/10/2012	EB1226844					**2.26**							**0.16**						
QLD_Hist_202012-3	MW009	16/01/2013	EB1301014																		
QLD_Hist_202012-3	MW009	22/01/2013	EB1301359					**1.8**							**0.07**						
QLD_Hist_202012-3	MW009	27/08/2013	EB1320742					**2.54**							**0.29**						
QLD_Hist_202012-3	MW009	22/02/2017	EB1703481	**0.25**	**0.23**	**1.44**	**0.07**	**2.26**		<0.02	**0.6**	**0.69**	**0.7**	**0.25**	**0.31**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW009	18/10/2017	EB1721647	**0.19**	**0.25**	**1.19**	**0.07**	**1.77**		<0.02	**0.1**	**0.58**	**0.72**	**0.36**	**0.26**	**0.05**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW009	1/05/2019	EB1911342	**0.18**	**0.16**	**1.13**	**0.04**	**1.27**		<0.02	**0.2**	**0.37**	**0.47**	**0.14**	**0.14**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW009	29/11/2019	EB1932183	**0.23**	**0.20**	**1.28**	**0.06**	**1.62**		<0.02	**0.2**	**0.44**	**0.52**	**0.15**	**0.20**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW009	29/11/2019	EB1932183	**0.23**	**0.19**	**1.23**	**0.06**	**1.58**		<0.02	**0.2**	**0.43**	**0.52**	**0.15**	**0.20**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW009	29/11/2019	232094	**0.20**	**0.17**	**1.2**	**0.06**	**1.6**		<0.02	**0.23**	**0.44**	**0.49**	**0.18**	**0.22**	**0.04**	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_Hist_202012-3	MW012	18/12/2008	CS0802587	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	18/12/2008	EB0817974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220058	-	-	-	-	**0.15**	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	17/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	17/10/2012	EB1227213	-	-	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	11/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	11/02/2013	EB1303337	-	-	-	-	**0.21**	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	28/08/2013	EB1320949	-	-	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	23/02/2017	EB1703601	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW012	10/10/2017	EB1720882	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW012	11/10/2017	EB1721001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW012	8/05/2019	EB1911948	<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	<0.12
QLD_0861_PFAS	MW012	26/11/2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	27/04/2020	EB2011562	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW012	20/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	27/10/2021	EB2130850	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	27/10/2021	EB2130850	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	27/10/2021	RN1333717	<0.01	<0.01	<0.01	<0.01	**0.024**	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW012	6/04/2022	EB2209951	<0.05	<0.02	<0.02	<0.02	**0.17**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW012	24/10/2022	EB2231825	<0.02	<0.02	<0.01	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	24/10/2022	EB2231825	<0.02	<0.02	<0.01	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW012	24/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	**0.034**	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW012	21/04/2023	EB2312062-AA	<0.02	<0.02	**0.02**	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW012	27/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW012	28/10/2023	EB2333894-AA	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW012	30/10/2023	EB2333894-AA	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW012	15/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	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
PFAS NEMP 2020 Drinking Water															0.56							
PFAS NEMP 2020 Freshwater 95%								0.13							220							
PFAS NEMP 2020 Freshwater 99%								0.00023							19							
Project ID	**Location Code**	**Date**	**Lab Report Number**																			
QLD_Hist_202012-3	MW015	18/12/2008	EB0817974																			
QLD_Hist_202012-3	MW015	8/11/2011	EB1123988					**1.71**							**0.08**							
QLD_Hist_202012-3	MW015	25/07/2012	EB1219635					**0.09**							**0.18**							
QLD_Hist_202012-3	MW015	25/07/2012	EB1219644																			
QLD_Hist_202012-3	MW015	25/07/2012	EB1219646																			
QLD_Hist_202012-3	MW015	17/10/2012	EB1226401																			
QLD_Hist_202012-3	MW015	17/10/2012	EB1227213					**4.4**							**0.35**							
QLD_Hist_202012-3	MW015	25/01/2013	EB1301615					**0.09**							<0.02							
QLD_Hist_202012-3	MW015	25/01/2013	EB1301014																			
QLD_Hist_202012-3	MW015	29/08/2013	EB1321088					**0.21**							**0.15**							
QLD_Hist_202012-3	MW018	30/07/2012	EB1220053					**0.2**							<0.02							
QLD_Hist_202012-3	MW018	30/07/2012	EB1220054																			
QLD_Hist_202012-3	MW018	30/07/2012	EB1220055																			
QLD_Hist_202012-3	MW018	30/07/2012	EB1220055																			
QLD_Hist_202012-3	MW018	16/10/2012	EB1226401																			
QLD_Hist_202012-3	MW018	16/10/2012	EB1226948					<0.02							<0.02							
QLD_Hist_202012-3	MW018	11/02/2013	EB1302672																			
QLD_Hist_202012-3	MW018	11/02/2013	EB1303337					**0.25**							<0.02							
QLD_Hist_202012-3	MW018	12/09/2013	EB1322354	<0.02		<0.02		<0.02					<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.5
QLD_Hist_202012-3	MW018	1/03/2017	EB1704014	<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	<0.12
QLD_Hist_202012-3	MW018	13/10/2017	EB1721221	<0.02	<0.02	<0.02	<0.02	<0.01		<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW020	31/07/2012	EB1220058	-	-	-	-	**15.5**	-	-	-	-	-	-	**1.14**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	31/07/2012	EB1220060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	17/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	17/10/2012	EB1227213	-	-	-	-	**12**	-	-	-	-	-	-	**0.83**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	6/02/2013	EB1302670	-	-	-	-	**37**	-	-	-	-	-	-	**1.03**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	6/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	27/08/2013	EB1320742	-	-	-	-	**8.02**	-	-	-	-	-	-	**0.39**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	23/02/2017	EB1703601	**1.14**	**1.06**	**5.91**	**0.17**	**1.9**	-	<0.02	<0.1	**1.05**	**0.88**	**0.23**	**0.28**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW020	9/10/2017	EB1720776	**0.32**	**0.5**	**2.79**	**0.12**	**1.1**	-	<0.02	<0.1	**0.6**	**0.82**	**0.32**	**0.36**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW020	8/05/2019	EB1911948	**1.30**	**1.51**	**12.2**	**0.62**	**10.5**	-	<0.05	<0.2	**2.18**	**3.69**	**1.20**	**1.31**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFAS	MW020	8/05/2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_FSBGME	MW020	25/06/2019	662866	**0.56**	**0.84**	**8.1**	**0.33**	**6.8**	<0.01	<0.01	**0.25**	**1**	**2**	**0.69**	**0.8**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
QLD_0861_FSBGME	MW020	25/06/2019	662866	**1.7**	**2.1**	**26**	**1.1**	**25**	<0.01	<0.01	**1.1**	**4.4**	**10**	**1.8**	**1.8**	**0.13**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
QLD_0861_FSBGME	MW020	25/06/2019	EB1917024	**2.26**	**2.94**	**23.0**	**1.00**	**11.3**	-	<0.05	<0.5	**4.12**	**6.51**	**2.08**	**2.20**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFAS	MW020	25/11/2019	EB1932183	**0.73**	**0.83**	**6.51**	**0.28**	**3.25**	-	<0.02	**0.3**	**1.22**	**1.88**	**0.76**	**0.78**	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW020	27/04/2020	EB2011562	**0.98**	**1.28**	**10.6**	**0.81**	**9.87**	-	<0.07	<0.4	**1.29**	**2.48**	**1.02**	**1.33**	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.18
QLD_0861_PFASOMP	MW020	13/10/2020	EB2027172	**0.39**	**0.44**	**3.53**	**0.23**	**3.29**	-	<0.10	<0.50	**0.54**	**0.90**	**0.37**	**0.52**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW020	20/04/2021	EB2111121	**1.10**	**2.02**	**10.6**	**1.70**	**30.3**	-	<0.02	**0.5**	**2.07**	**3.29**	**1.20**	**2.07**	**0.18**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW020	27/10/2021	EB2130850	**0.63**	**0.75**	**5.78**	**0.46**	**7.07**	-	<0.02	**0.4**	**0.90**	**1.71**	**0.50**	**0.91**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW020	6/04/2022	EB2209951	**1.42**	**1.57**	**13.8**	**1.55**	**72.1**	-	<0.05	<0.9	**2.71**	**4.22**	**1.19**	**2.60**	**0.51**	**0.11**	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW020	25/10/2022	EB2231825	**0.16**	**0.17**	**1.12**	**0.06**	**2.13**	-	<0.02	**0.2**	**0.36**	**0.31**	**0.09**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW020	21/04/2023	EB2312062-AA	**4.36**	**5.78**	**46.8**	**3.69**	**87.1**	-	<0.10	**2.1**	**7.27**	**12.1**	**4.19**	**5.59**	**0.64**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.24
QLD_0861_PFASOMP_23	MW020	27/10/2023	RN1410504	**3.5**	**4.4**	**37**	**1.9**	**80**	**0.06**	<0.01	**1.6**	**5.4**	**9**	**2.7**	**4.2**	**0.63**	**0.058**	<0.01	<0.01	<0.02	<0.02	<0.02
QLD_0861_PFASOMP_23	MW020	28/10/2023	EB2333894-AA	**3.67**	**4.74**	**39.0**	**2.35**	**79.6**	**0.43**	<0.02	**2.5**	**5.19**	**9.73**	**3.87**	**4.78**	**0.59**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW020	30/10/2023	EB2333894-AA	**4.20**	**6.00**	**48.1**	**3.39**	**97.7**	<0.24	<0.24	**4.9**	**6.85**	**11.5**	**3.86**	**6.16**	**0.66**	<0.24	<0.24	<0.24	<0.24	<0.24	<0.59
QLD_0861_PFASOMP_24	MW020	15/04/2024	EB2413910	**2.61**	**3.38**	**27.5**	**2.02**	**79.0**	-	<0.24	<1.2	**3.45**	**7.00**	**1.90**	**3.17**	**0.40**	<0.24	<0.24	<0.24	<0.24	<0.24	<0.59
QLD_0861_PFAS	MW021	8/05/2019	EB1911948	**0.66**	**1.06**	**12.1**	**0.55**	**45.0**	-	<0.02	<0.1	**0.33**	**1.72**	**0.40**	**1.44**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW021	19/11/2019	EB1931427	**0.77**	**1.38**	**13.3**	**0.81**	**56.8**	-	<0.02	**0.2**	**0.40**	**2.14**	**0.54**	**1.69**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW021	29/04/2020	EB2011562	**0.93**	**1.36**	**13.1**	**0.68**	**44.7**	-	<0.06	<0.3	**0.48**	**2.19**	**0.50**	**1.72**	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16
QLD_0861_PFASOMP	MW021	14/10/2020	EB2027172	**0.80**	**1.30**	**12.7**	**0.59**	**41.2**	-	<0.05	**0.33**	**0.50**	**2.22**	**0.50**	**1.62**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW021	19/04/2021	EB2111121	**1.19**	**2.52**	**19.5**	**1.70**	**61.8**	-	<0.02	**0.3**	**0.57**	**2.82**	**0.68**	**2.19**	**0.07**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW021	28/10/2021	EB2130850	**1.40**	**2.08**	**24.4**	**1.60**	**71.2**	-	<0.07	<0.3	**0.70**	**3.33**	**0.80**	**3.10**	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.17
QLD_0861_PFASOMP	MW021	30/03/2022	EB2209950	**1.60**	**2.32**	**24.9**	**1.08**	**35.0**	-	<0.05	<0.4	**0.69**	**3.12**	**0.74**	**2.43**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW021	26/10/2022	EB2231825	**1.91**	**3.57**	**37.4**	**2.06**	**50.6**	-	<0.05	**0.3**	**0.73**	**4.45**	**0.93**	**3.07**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP_23	MW021	28/04/2023	EB2312761-AA	**2.42**	**4.75**	**48.9**	**2.20**	**92.8**	-	<0.25	<1.2	**1.15**	**5.75**	**1.50**	**4.45**	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.62
QLD_0861_PFASOMP_23	MW021	28/04/2023	EB2312761-AA	**2.34**	**4.85**	**48.2**	**2.51**	**90.7**	-	<0.24	<1.2	**1.05**	**5.71**	**1.63**	**4.36**	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.61
QLD_0861_PFASOMP_23	MW021	28/04/2023	RN1393133	**1.5**	**2.7**	**30**	**2.3**	**58**	**0.12**	<0.01	**0.44**	**0.89**	**3.4**	**1**	**2.4**	**0.072**	**0.013**	<0.01	<0.01	<0.02	<0.02	<0.02
QLD_0861_PFASOMP_23	MW021	27/10/2023	EB2333887-AA	**2.18**	**4.25**	**42.8**	**2.08**	**148**	-	<0.10	**0.5**	**1.03**	**4.72**	**1.10**	**4.72**	**0.11**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.24
QLD_Hist_202012-3	MW022	24/01/2013	EB1301595	-	-	-	-	**0.88**	-	-	-	-	-	-	**0.58**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW022	24/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW022	28/08/2013	EB1320949	-	-	-	-	**2.76**	-	-	-	-	-	-	**1.37**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW022	2/03/2017	EB1704146	**3.6**	**3.72**	**30.8**	**0.26**	**1.14**	-	<0.02	**1**	**0.87**	**5.18**	**0.28**	**0.29**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW022	16/10/2017	EB1721395	**1.79**	**2.22**	**13.5**	**0.14**	**0.64**	-	<0.02	**0.3**	**0.52**	**2.47**	**0.24**	**0.33**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW022	30/04/2019	EB1911342	**1.95**	**2.05**	**16.9**	**0.12**	**0.40**	-	<0.02	**0.6**	**0.48**	**2.62**	**0.21**	**0.23**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW022	19/11/2019	EB1931427	**2.22**	**2.00**	**10.9**	**0.12**	**1.00**	-	<0.02	**0.8**	**0.43**	**1.87**	**0.29**	**0.35**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	21/04/2020	EB2011246-AC	**2.15**	**1.82**	**8.36**	**0.14**	**0.95**	-	<0.02	**0.83**	**0.32**	**1.41**	**0.25**	**0.34**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	12/10/2020	EB2027172	**2.24**	**1.75**	**9.34**	**0.14**	**0.91**	-	<0.02	**0.77**	**0.31**	**1.02**	**0.22**	**0.34**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	16/04/2021	EB2111121	**1.26**	**1.92**	**16.3**	**0.32**	**1.83**	-	<0.02	**0.4**	**0.26**	**1.26**	**0.24**	**0.56**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	21/10/2021	EB2130835	**1.42**	**1.27**	**7.72**	**0.15**	**1.29**	-	<0.02	**0.7**	**0.29**	**1.44**	**0.27**	**0.40**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW022	30/03/2022	EB2209950	**0.61**	**0.61**	**3.95**	**0.05**	**0.29**	-	<0.02	**0.2**	**0.13**	**0.57**	**0.07**	**0.14**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	9/11/2022	EB2233631	**0.18**	**0.21**	**1.42**	<0.02	**0.12**	-	<0.02	<0.1	**0.04**	**0.23**	**0.02**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	9/11/2022	EB2233631	**0.18**	**0.22**	**1.53**	<0.02	**0.11**	-	<0.02	<0.1	**0.04**	**0.21**	**0.02**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW022	9/11/2022	RN1373013	**0.13**	**0.15**	**1.1**	<0.01	**0.071**	<0.01	<0.01	**0.067**	**0.025**	**0.13**	**0.013**	**0.018**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
QLD_0861_PFASOMP_23	MW022	28/04/2023	EB2312761-AA	**1.15**	**1.35**	**8.16**	**0.11**	**0.79**	-	<0.03	**0.5**	**0.27**	**1.18**	**0.18**	**0.25**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.06
QLD_0861_PFASOMP_23	MW022	25/10/2023	EB2333887-AA	**1.52**	**1.51**	**8.06**	**0.14**	**2.03**	-	<0.02	**0.7**	**0.31**	**1.30**	**0.23**	**0.45**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW022	19/04/2024	EB2413910	**0.68**	**0.59**	**3.79**	**0.06**	**0.68**	-	<0.02	**0.3**	**0.11**	**0.51**	**0.09**	**0.16**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW023	11/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW023	11/02/2013	EB1303337	-	-	-	-	**0.37**	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW023	27/08/2013	EB1320742	-	-	-	-	**0.59**	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW023	21/02/2017	EB1703368	**0.06**	**0.03**	**0.26**	<0.02	**0.12**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW023	10/10/2017	EB1720882	**0.03**	**0.02**	**0.11**	<0.02	**0.08**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW023	13/05/2019	EB1912390	**0.03**	**0.02**	**0.10**	<0.02	**0.13**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05

TABLE A2: Groundwater Analytical Summary

	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water												0.56						
PFAS NEMP 2020 Freshwater 95%					0.13							220						
PFAS NEMP 2020 Freshwater 99%					0.00023							19						

Project ID	Location Code	Date	Lab Report Number																	
QLD_0861_PFASOMP	MW024	26/10/2022	EB2231825	<0.02	<0.02	**0.04**	<0.02	<0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW024	28/04/2023	EB2312761-AA	<0.03	<0.02	**0.09**	<0.02	**0.07**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW024	24/10/2023	EB2333887-AA	<0.02	<0.02	**0.04**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW024	16/04/2024	EB2413910	**0.02**	**0.02**	**0.08**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW025	24/01/2013	EB1301595	-	-	-	-	**0.24**	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW025	24/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW025	30/08/2013	EB1321090	-	-	-	-	**0.51**	-	-	-	-	-	-	-	**0.08**	-	-	-	-	-	-
QLD_Hist_202012-3	MW025	22/02/2017	EB1703481	**0.21**	**0.17**	**0.98**	**0.04**	**0.6**	-	<0.02	**0.1**	**0.06**	**0.16**	**0.03**	**0.08**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW025	11/10/2017	EB1721001	**0.29**	**0.2**	**1.29**	**0.02**	**0.3**	-	<0.02	<0.1	**0.05**	**0.18**	**0.03**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW025	30/04/2019	EB1911342	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW025	1/05/2019	EB1911342	**0.11**	**0.08**	**0.41**	<0.02	**0.12**	-	<0.02	<0.1	**0.02**	**0.08**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW025	19/11/2019	EB1931427	**0.10**	**0.07**	**0.45**	<0.02	**0.28**	-	<0.02	<0.1	<0.02	**0.07**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	27/04/2020	EB2011562	**0.11**	**0.10**	**0.50**	<0.02	**0.27**	-	<0.02	<0.1	**0.03**	**0.08**	<0.02	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	14/10/2020	EB2027172	**0.12**	**0.08**	**0.41**	<0.02	**0.16**	-	<0.02	<0.10	**0.03**	**0.06**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	14/10/2020	EB2027176-AA	**0.11**	**0.07**	**0.41**	<0.02	**0.12**	-	<0.02	<0.10	**0.03**	**0.07**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	14/10/2020	RN1292028	**0.096**	**0.064**	**0.4**	<0.01	**0.12**	<0.01	<0.01	<0.05	**0.026**	**0.054**	<0.01	**0.017**	<0.01	<0.01	<0.01	<0.01	<0.02
QLD_0861_PFASOMP	MW025	16/04/2021	EB2111121	**0.14**	**0.12**	**0.58**	**0.02**	**0.37**	-	<0.02	<0.1	**0.05**	**0.12**	**0.02**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	27/10/2021	EB2130850	**0.13**	**0.10**	**0.58**	<0.02	**0.14**	-	<0.02	<0.1	**0.03**	**0.08**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	6/04/2022	EB2209951	**0.28**	**0.21**	**1.17**	**0.04**	**0.46**	-	<0.02	**0.2**	**0.21**	**0.29**	**0.08**	**0.12**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW025	24/10/2022	EB2231825	**0.25**	**0.20**	**1.38**	**0.06**	**1.06**	-	<0.02	**0.3**	**0.38**	**0.64**	**0.15**	**0.17**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW025	20/04/2023	EB2312062-AA	**0.27**	**0.26**	**1.34**	**0.06**	**1.03**	-	<0.02	**0.3**	**0.43**	**0.58**	**0.16**	**0.17**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW025	28/10/2023	EB2333894-AA	**0.25**	**0.20**	**1.27**	**0.05**	**1.09**	<0.02	<0.02	**0.3**	**0.39**	**0.47**	**0.14**	**0.15**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW025	3/05/2024	EB2414902	**0.18**	**0.15**	**1.07**	**0.05**	**1.39**	-	<0.02	**0.2**	**0.36**	**0.48**	**0.12**	**0.13**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW026	30/08/2013	EB1321090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW026	30/08/2013	EB1323023	-	-	-	-	**43.4**	-	-	-	-	-	-	**4.42**	-	-	-	-	-
QLD_Hist_202012-3	MW026	22/02/2017	EB1703481	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW026	9/10/2017	EB1720776	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW026	7/05/2019	EB1911948	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFAS	MW026	29/11/2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW026	28/04/2020	EB2011562	<0.02	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW026	16/10/2020	EB2027176-AA	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW026	20/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW026	27/10/2021	EB2130850	<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	<0.06
QLD_0861_PFASOMP	MW026	6/04/2022	EB2209951	<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	<0.06
QLD_0861_PFASOMP	MW026	24/10/2022	EB2231825	<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	<0.06
QLD_0861_PFASOMP_23	MW026	19/04/2023	EB2312062-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW026	27/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW028	29/08/2013	EB1321088	-	-	-	-	**40.6**	-	-	-	-	-	-	**2.45**	-	-	-	-	-
QLD_Hist_202012-3	MW028	1/03/2017	EB1704014	**4.54**	**4.53**	**19.9**	**2.32**	**40.7**	-	<0.02	**1**	**0.96**	**4.68**	**0.66**	**1.58**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW028	12/10/2017	EB1721110	**3.74**	**4.91**	**19.1**	**1.37**	**28.4**	-	<0.02	**0.1**	**1.25**	**5.24**	**0.94**	**2**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW028	16/01/2018	EB1802042	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW028	7/05/2019	EB1911948	**1.90**	**1.85**	**13.6**	**1.26**	**17.1**	-	<0.02	<0.1	**0.46**	**2.54**	**0.47**	**0.87**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW028	27/11/2019	EB1932183	**3.57**	**2.61**	**20.3**	**3.08**	**33.9**	-	<0.02	**0.8**	**0.93**	**4.74**	**0.98**	**1.75**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW028	27/11/2019	EB1932183	**3.61**	**2.82**	**21.9**	**3.19**	**35.6**	-	<0.02	**0.8**	**1.00**	**4.83**	**0.96**	**1.78**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW028	27/11/2019	232094	**4.2**	**4.2**	**35**	**2.4**	**48**	-	<0.02	**1.0**	**1.2**	**5.5**	**0.89**	**2.1**	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFASOMP	MW028	22/04/2020	EB2011246-AC	**3.27**	**3.81**	**21.3**	**2.21**	**22.9**	-	<0.02	**0.68**	**0.81**	**3.89**	**0.78**	**1.42**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW028	15/10/2020	EB2027172	**3.38**	**3.43**	**22.7**	**2.02**	**25.4**	-	<0.10	**0.89**	**0.98**	**4.68**	**0.87**	**1.60**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW028	16/04/2021	EB2111121	**3.49**	**3.72**	**25.3**	**2.54**	**41.2**	-	<0.08	**0.9**	**1.10**	**5.45**	**1.00**	**1.98**	<0.08	<0.08	<0.08	<0.08	<0.08	<0.21
QLD_0861_PFASOMP	MW028	21/10/2021	EB2130835	**4.00**	**3.65**	**28.1**	**2.82**	**32.0**	-	<0.05	**0.7**	**1.01**	**5.48**	**0.90**	**1.86**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW028	4/04/2022	EB2209950	**0.22**	**0.21**	**1.50**	**0.20**	**3.37**	-	<0.02	<0.1	**0.07**	**0.31**	**0.05**	**0.13**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW028	26/10/2022	EB2231825	**0.80**	**0.85**	**5.97**	**0.64**	**10.3**	-	<0.02	**0.2**	**0.23**	**1.27**	**0.21**	**0.42**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW028	19/04/2023	EB2312062-AA	**1.46**	**2.28**	**10.2**	**1.43**	**16.2**	-	<0.02	**0.3**	**0.46**	**1.96**	**0.40**	**0.84**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW028	25/10/2023	EB2333887-AA	**1.38**	**1.81**	**9.22**	**0.97**	**12.5**	-	<0.02	**0.3**	**0.43**	**1.85**	**0.32**	**0.74**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW028	18/04/2024	EB2413910	**2.81**	**2.96**	**20.5**	**1.77**	**32.1**	-	<0.05	**0.6**	**0.85**	**4.23**	**0.80**	**1.44**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_Hist_202012-3	MW029	29/08/2013	EB1321088	-	-	-	-	**0.7**	-	-	-	-	-	-	**0.02**	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW029	1/03/2017	EB1704014	**0.34**	**0.3**	**2.26**	**0.12**	**2.03**	-	<0.02	<0.1	**0.05**	**0.29**	**0.04**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW029	12/10/2017	EB1721110	**0.44**	**0.49**	**3.07**	**0.1**	**3.03**	-	<0.02	<0.1	**0.12**	**0.47**	**0.07**	**0.15**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water															0.56						
PFAS NEMP 2020 Freshwater 95%								0.13							220						
PFAS NEMP 2020 Freshwater 99%								0.00023							19						
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFAS	MW029	7/05/2019	EB1911948	**0.38**	**0.37**	**2.67**	**0.18**	**3.12**	-	<0.02	<0.1	**0.08**	**0.44**	**0.07**	**0.14**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW029	27/11/2019	EB1932183	**0.44**	**0.47**	**3.26**	**0.21**	**3.98**	-	<0.02	<0.1	**0.10**	**0.47**	**0.10**	**0.14**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW029	22/04/2020	EB2011246-AC	**0.55**	**0.64**	**3.72**	**0.28**	**3.33**	-	<0.02	<0.1	**0.12**	**0.6**	**0.11**	**0.19**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW029	15/10/2020	EB2027172	**0.77**	**0.75**	**4.66**	**0.32**	**4.25**	-	<0.02	<0.10	**0.19**	**0.87**	**0.16**	**0.27**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW029	16/04/2021	EB2111121	**0.55**	**0.68**	**3.98**	**0.30**	**4.29**	-	<0.02	**0.1**	**0.15**	**0.71**	**0.12**	**0.20**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW029	21/10/2021	EB2130835	**0.76**	**0.75**	**5.39**	**0.38**	**4.53**	-	<0.02	<0.1	**0.18**	**0.98**	**0.14**	**0.27**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW029	4/04/2022	EB2209950	**0.83**	**1.02**	**5.11**	**0.50**	**6.04**	-	<0.02	<0.2	**0.20**	**0.92**	**0.17**	**0.32**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW029	26/10/2022	EB2231825	**0.78**	**0.97**	**6.14**	**0.56**	**5.63**	-	<0.02	**0.1**	**0.20**	**1.11**	**0.18**	**0.29**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW029	19/04/2023	EB2312062-AA	**0.71**	**0.94**	**5.27**	**0.38**	**4.29**	-	<0.02	**0.2**	**0.21**	**0.88**	**0.16**	**0.26**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW029	25/10/2023	EB2333887-AA	**0.64**	**0.77**	**4.07**	**0.25**	**3.44**	-	<0.02	**0.1**	**0.16**	**0.72**	**0.12**	**0.21**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW029	18/04/2024	EB2413910	**0.68**	**0.76**	**4.73**	**0.32**	**4.33**	-	<0.02	**0.1**	**0.18**	**0.85**	**0.15**	**0.23**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW029	18/04/2024	EB2413950	**0.71**	**0.73**	**3.94**	**0.30**	**3.82**	-	<0.02	**0.1**	**0.16**	**0.82**	**0.12**	**0.18**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW029	18/04/2024	RN1427801	**0.62**	**0.55**	**3**	**0.21**	**2.3**	<0.01	<0.01	**0.13**	**0.14**	**0.66**	**0.091**	**0.16**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_Hist_202012-3	MW030	27/02/2017	EB1703780	**0.2**	**0.11**	**0.32**	<0.02	<0.01	-	<0.02	<0.1	**0.04**	**0.13**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW030	18/10/2017	EB1721647	**0.57**	**0.81**	**1.6**	**0.03**	**0.04**	-	<0.02	<0.1	**0.19**	**1.29**	**0.37**	**0.23**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW030	10/05/2019	EB1911948	**1.14**	**0.83**	**2.59**	<0.10	<0.10	-	<0.10	<0.5	**0.36**	**2.52**	**0.40**	**0.27**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFAS	MW030	20/11/2019	EB1931427	**1.07**	**0.85**	**2.75**	<0.10	<0.10	-	<0.10	<0.5	**0.22**	**2.31**	**0.36**	**0.20**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW030	22/04/2020	EB2011246-AC	**1.24**	**1.01**	**2.69**	**0.04**	**0.03**	-	<0.02	**0.4**	**0.41**	**2.51**	**0.39**	**0.26**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW030	13/10/2020	EB2027172	**1.48**	**1.03**	**2.91**	<0.10	<0.10	-	<0.10	<0.50	**0.57**	**2.68**	**0.49**	**0.32**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW030	13/04/2021	EB2111121	**1.45**	**1.10**	**2.96**	**0.05**	<0.06	-	<0.02	**0.4**	**0.61**	**2.84**	**0.46**	**0.31**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW030	21/10/2021	EB2130835	**1.79**	**1.27**	**3.38**	**0.03**	**0.03**	-	<0.02	**0.5**	**0.78**	**4.28**	**0.52**	**0.31**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW030	1/04/2022	EB2209950	**2.97**	**2.20**	**5.31**	<0.07	**0.12**	-	<0.02	**0.7**	**1.14**	**6.31**	**0.88**	**0.57**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW030	25/10/2022	EB2231825	**5.49**	**4.49**	**11.4**	**0.22**	**0.16**	-	<0.02	**1.5**	**2.01**	**13.2**	**1.83**	**1.19**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW030	22/05/2023	EB2315514	**4.66**	**4.62**	**12.7**	**0.21**	**0.24**	-	<0.02	**1.2**	**1.88**	**9.86**	**1.76**	**1.37**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW030	23/10/2023	EB2333887-AA	**3.90**	**3.79**	**11.3**	**0.30**	**0.41**	-	<0.02	**0.9**	**1.44**	**7.69**	**1.32**	**1.41**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW030	19/04/2024	EB2413910	**4.88**	**4.39**	**13.5**	**0.19**	**0.23**	-	<0.02	**1.3**	**1.85**	**10.5**	**1.78**	**1.29**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_Hist_202012-3	MW031	29/08/2013	EB1321088	-	-	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW031	29/08/2013	EB1321088	-	-	-	-	**0.76**	-	-	-	-	-	-	**0.02**	-	-	-	-	-	-
QLD_Hist_202012-3	MW031	27/02/2017	EB1703780	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW031	27/02/2017	EB1703780	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW031	27/02/2017	535909	<0.01	<0.01	<0.01	<0.01	**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
QLD_Hist_202012-3	MW031	18/10/2017	EB1721647	<0.02	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW031	10/05/2019	EB1911948	<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	<0.12
QLD_0861_PFAS	MW031	10/05/2019	EB1911948	<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	<0.12
QLD_0861_PFAS	MW031	10/05/2019	217521	<0.01	<0.01	**0.01**	<0.01	**0.01**	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW031	20/11/2019	EB1931427	<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	<0.12
QLD_0861_PFASOMP	MW031	22/04/2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW031	22/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW031	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW031	13/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW031	21/10/2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW031	1/04/2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW031	25/10/2022	EB2231825	<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	<0.06
QLD_0861_PFASOMP_23	MW031	26/04/2023	EB2312761-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW031	23/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW031	23/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW031	23/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_24	MW031	19/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW032	30/08/2013	EB1321090	-	-	-	-	<0.02	-	-	-	-			<0.02	-	-	-	-	-	-
QLD_Hist_202012-3	MW032	24/02/2017	EB1703684	**2.55**	**1.55**	**7.38**	**0.59**	**21.5**	-	<0.02	<0.1	**0.56**	**1.86**	**0.33**	**1.05**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW032	17/10/2017	EB1721554	**1.76**	**1.67**	**7.65**	**0.93**	**23.1**	-	<0.02	**0.2**	**0.79**	**3.58**	**1.04**	**2.77**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW032	2/05/2019	EB1911342	**1.48**	**1.37**	**8.06**	**0.68**	**17.0**	-	<0.02	**0.5**	**0.60**	**3.34**	**0.83**	**1.63**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW032	19/11/2019	EB1931427	**1.60**	**1.49**	**8.92**	**0.74**	**15.9**	-	<0.02	**0.6**	**0.70**	**3.63**	**0.97**	**1.94**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW032	27/04/2020	EB2011562	**1.70**	**1.57**	**9.04**	**0.81**	**20.8**	-	<0.07	<0.3	**0.61**	**3.43**	**0.92**	**1.92**	<0.07	<0.07	<0.07	<0.07	<0.07	<0.17
QLD_0861_PFASOMP	MW032	12/10/2020	EB2027172	**1.62**	**1.56**	**8.95**	**0.78**	**18.7**	-	<0.05	**0.72**	**0.76**	**3.95**	**0.90**	**2.01**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW032	21/04/2021	EB2111121	**1.72**	**1.85**	**8.64**	**0.93**	**23.2**	-	**0.03**	**0.5**	**0.80**	**3.88**	**1.04**	**2.13**	**0.07**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW032	21/04/2021	EB2111121	**1.82**	**1.79**	**8.50**	**0.98**	**22.8**	-	<0.02	**0.6**	**0.83**	**3.40**	**1.08**	**2.20**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW032	21/04/2021	RN1313031	**1.6**	**1.3**	**5.9**	**0.55**	**13**	<0.01	<0.01	**0.58**	**0.6**	**2.2**	**0.7**	**1.6**	**0.048**	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW032	25/10/2021	EB2130850	**1.68**	**1.50**	**9.21**	**0.86**	**24.0**	-	<0.10	<0.5	**0.76**	**4.36**	**0.98**	**2.27**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW032	25/10/2021	EB2130850	**1.65**	**1.57**	**9.19**	**0.81**	**23.6**	-	<0.10	<0.5	**0.77**	**4.41**	**0.96**	**2.21**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW032	25/10/2021	RN1333717	**1.5**	**1.4**	**8.4**	**0.68**	**18**	<0.01	<0.01	**0.6**	**0.73**	**3.2**	**0.73**	**1.6**	**0.062**	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW032	6/04/2022	EB2209951	**2.21**	**2.07**	**10.2**	**0.92**	**24.6**	-	<0.02	**0.7**	**0.86**	**4.23**	**1.11**	**2.67**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW032	24/10/2022	EB2231825	**1.69**	**1.89**	**9.52**	**1.47**	**27.9**	-	<0.02	**0.6**	**0.72**	**4.30**	**0.89**	**2.23**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW032	27/04/2023	EB2312761-AA	**1.59**	**1.53**	**7.86**	**0.87**	**19.9**	-	<0.02	**0.7**	**0.80**	**3.29**	**0.85**	**1.86**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP_23	MW032	27/10/2023	EB2333887-AA	**1.66**	**1.72**	**9.01**	**0.75**	**20.9**	-	<0.02	**0.6**	**0.77**	**3.44**	**0.78**	**2.02**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW032	15/04/2024	EB2413910	**1.60**	**1.92**	**11.2**	**0.88**	**24.1**	-	<0.02	**0.6**	**0.81**	**3.93**	**1.01**	**2.13**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_Hist_202012-3	MW033	22/02/2017	EB1703481	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW033	27/03/2017	539718	<0.01	<0.01	<0.01	<0.01	<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
QLD_Hist_202012-3	MW033	10/10/2017	EB1720882	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW033	8/02/2018	EB1803867	<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	<0.12
QLD_0861_PFAS	MW033	14/05/2019	EB1912390	<0.05	<0.05	<0.05	<0.05	**0.06**	-	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFAS	MW033	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	MW033	28/04/2020	EB2011562	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW033	19/10/2020	EB2027539	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW033	19/10/2020	EB2027539	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW033	19/10/2020	RN1292508	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW033	20/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW033	27/10/2021	EB2130850	<0.04	<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	<0.06
QLD_0861_PFASOMP	MW033	6/04/2022	EB2209951	<0.04	<0.02	<0.01	<0.02	<0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW033	6/04/2022	EB2209942	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW033	6/04/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW033	26/10/2022	EB2231825	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW033	22/05/2023	EB2315514	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW033	27/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW033	17/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water															0.56						
PFAS NEMP 2020 Freshwater 95%								0.13							220						
PFAS NEMP 2020 Freshwater 99%								0.00023							19						
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFASOMP_24	MW033	17/04/2024	EB2413950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW033	17/04/2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
QLD_Hist_202012-3	MW034	1/03/2017	EB1704014	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW034	10/05/2019	EB1911948	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW034	20/11/2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW034	20/11/2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW034	21/11/2019	232494	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW034	21/11/2019	231783	<0.01	<0.01	<0.01	<0.01	**0.01**	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW034	2/12/2019	EB1932627	<0.0005	<0.0005	<0.0005	<0.0005	**0.0038**	-	<0.0005	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
QLD_0861_PFASOMP	MW034	23/04/2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	**0.21**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	23/04/2020	RN1274652	<0.01	<0.01	**0.013**	<0.01	**0.23**	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW034	13/10/2020	EB2027172	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	13/10/2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	13/10/2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW034	19/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	**0.59**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	19/04/2021	EB2111121	<0.03	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	19/04/2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW034	21/10/2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	1/04/2022	EB2209950	<0.02	<0.02	<0.01	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW034	9/11/2022	EB2233631	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW034	22/05/2023	EB2315514	<0.02	<0.02	<0.01	<0.02	**0.07**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW034	23/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW034	19/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW035	1/03/2017	EB1704014	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW035	13/10/2017	EB1721221	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW035	1/05/2019	EB1911342	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW035	21/11/2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW035	22/04/2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW035	14/10/2020	EB2027172	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW035	16/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW035	21/10/2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW035	4/04/2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW035	9/11/2022	EB2233631	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW035	9/05/2023	EB2314270	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW035	24/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW035	16/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW036	28/02/2017	EB1703884	<0.02	<0.02	**0.02**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW036	12/10/2017	EB1721110	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW036	7/05/2019	EB1911948	<0.02	<0.02	**0.03**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW036	27/11/2019	EB1932183	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	22/04/2020	EB2011246-AC	<0.02	<0.02	**0.03**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	15/10/2020	EB2027172	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	16/04/2021	EB2111121	<0.02	<0.02	**0.04**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	21/10/2021	EB2130835	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	4/04/2022	EB2209950	<0.02	<0.02	**0.04**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	25/10/2022	EB2231825	<0.02	<0.02	**0.04**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	25/10/2022	EB2231825	<0.02	<0.02	**0.04**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW036	25/10/2022	RN1371573	<0.01	<0.01	**0.03**	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW036	19/04/2023	EB2312062-AA	<0.02	<0.02	**0.02**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW036	23/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW036	23/10/2023	RN1410504	<0.01	<0.01	**0.02**	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW036	24/10/2023	EB2333887-AA	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW036	18/04/2024	EB2413910	<0.02	<0.02	**0.08**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW037	24/02/2017	EB1703684	**2.98**	**1.58**	**3.7**	<0.02	**0.02**	-	<0.02	<0.1	**0.16**	**0.57**	**0.04**	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW037	11/10/2017	EB1721001	**3.48**	**2.72**	**7.57**	<0.02	**0.03**	-	<0.02	<0.1	**0.23**	**1.47**	**0.19**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW037	11/10/2017	EB1721001	**3.18**	**2.54**	**6.95**	<0.02	**0.03**	-	<0.02	<0.1	**0.25**	**1.43**	**0.17**	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_Hist_202012-3	MW037	11/10/2017	EB1721001	**2.38**	**2.43**	**15**	**0.94**	**51.7**	-	<0.02	**0.4**	**0.68**	**3.16**	**0.62**	**1.1**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW037	8/05/2019	EB1911948	**2.74**	**2.09**	**6.50**	<0.02	**0.04**	-	<0.02	<0.1	**0.28**	**1.76**	**0.18**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW037	19/11/2019	EB1931427	**2.31**	**1.96**	**5.81**	<0.02	**0.01**	-	<0.02	**0.2**	**0.29**	**1.41**	**0.16**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW037	22/04/2020	EB2011246-AC	**1.96**	**1.71**	**4.6**	<0.04	<0.04	-	<0.04	<0.2	**0.2**	**1.24**	**0.13**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.09
QLD_0861_PFASOMP	MW037	22/04/2020	RN1274652	**1.5**	**1.2**	**3.8**	<0.01	**0.025**	<0.01	<0.01	**0.15**	**0.19**	**1.1**	**0.11**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW037	12/10/2020	EB2027172	**2.01**	**1.42**	**4.25**	<0.02	**0.03**	-	<0.02	<0.10	**0.20**	**1.08**	**0.13**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW037	20/04/2021	EB2111121	**1.38**	**1.46**	**3.57**	<0.02	**0.06**	-	<0.02	<0.1	**0.18**	**0.90**	**0.12**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW037	27/10/2021	EB2130850	**1.45**	**1.24**	**3.78**	<0.02	**0.02**	-	<0.02	**0.1**	**0.16**	**0.97**	**0.10**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW037	30/03/2022	EB2209950	**0.55**	**0.40**	**1.75**	**0.07**	**2.51**	-	<0.02	<0.1	**0.08**	**0.42**	**0.05**	**0.08**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW037	24/10/2022	EB2231825	**1.43**	**1.26**	**3.91**	<0.02	**0.41**	-	<0.02	**0.1**	**0.17**	**1.15**	**0.10**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW037	19/04/2023	EB2312062-AA	**2.24**	**2.53**	**6.26**	**0.08**	**0.56**	-	<0.02	**0.2**	**0.41**	**1.83**	**0.27**	**0.12**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_Stage2_23	MW037	10/08/2023	1018693	**1.8**	**1.4**	**5.4**	**0.06**	**0.18**	<0.01	<0.01	**0.18**	**0.24**	**1.2**	**0.16**	**0.06**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
QLD_0861_PFASOMP_23	MW037	23/10/2023	EB2333887-AA	**2.32**	**2.20**	**5.33**	**0.05**	**0.61**	-	<0.02	**0.2**	**0.35**	**1.68**	**0.18**	**0.09**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW037	23/10/2023	EB2333887-AA	**2.38**	**2.29**	**6.40**	**0.06**	**0.50**	-	<0.02	**0.6**	**0.36**	**1.76**	**0.22**	**0.11**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW037	23/10/2023	RN1410504	**2.1**	**1.5**	**6.4**	**0.037**	**0.33**	<0.01	<0.01	**0.35**	**0.41**	**2**	**0.21**	**0.084**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_24	MW037	15/04/2024	EB2413910	**2.43**	**2.35**	**8.14**	**0.08**	**0.84**	-	<0.02	**0.3**	**0.36**	**1.86**	**0.23**	**0.12**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW037	15/04/2024	EB2413950	**2.60**	**2.48**	**8.18**	**0.09**	**0.73**	-	<0.02	**0.3**	**0.39**	**1.97**	**0.22**	**0.13**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW037	15/04/2024	RN1427801	**2**	**1.4**	**5.5**	**0.041**	**0.44**	<0.01	<0.01	**0.3**	**0.39**	**1.7**	**0.2**	**0.086**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFAS	MW039	15/01/2018	EB1802042	**0.32**	**0.16**	**0.23**	<0.02	**0.23**		<0.02	<0.1	**0.09**	**0.30**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW039	15/01/2018	EB1802042	**0.35**	**0.21**	**0.28**	<0.02	**0.05**		<0.02	<0.1	**0.10**	**0.35**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW039	30/04/2019	EB1911342	**0.60**	**0.36**	**0.60**	<0.02	<0.01		<0.02	<0.1	**0.12**	**0.62**	**0.03**	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW039		184089	**0.34**	**0.15**	**0.24**	<0.01	<0.01		<0.02	**0.05**	**0.06**	**0.36**	**0.03**	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW041	21/02/2018	EB1804971	**0.10**	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.2	<0.05	**0.09**	**0.18**	<0.05	<0.05	<0.05	<0.05	**0.05**	<0.05	<0.12
QLD_0861_PFAS	MW041	8/05/2019	EB1911948	**0.14**	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFAS	MW041	2/12/2019	EB1932627	**0.07**	<0.02	**0.03**	<0.02	**0.05**	-	<0.02	<0.1	**0.06**	**0.02**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW041	23/04/2020	EB2011246-AC	**0.08**	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW041	14/10/2020	EB2027172	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.50	<0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW041	22/10/2021	EB2130835	**0.08**	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	**0.07**	**0.04**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW041	5/04/2022	EB2209951	**0.31**	**0.05**	**0.14**	<0.02	**0.30**	-	<0.02	<0.3	**0.37**	**0.21**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water															0.56						
PFAS NEMP 2020 Freshwater 95%								0.13							220						
PFAS NEMP 2020 Freshwater 99%								0.00023							19						
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFASOMP	MW041	25/10/2022	EB2231825	**0.10**	<0.02	**0.04**	<0.02	**0.08**	-	<0.02	**0.2**	**0.11**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.02	**0.02**	**0.03**	**0.10**
QLD_0861_PFASOMP_23	MW041	19/04/2023	EB2312062-AA	<0.02	<0.02	<0.02	<0.02	<0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW041	30/10/2023	EB2333887-AA	**0.58**	**0.13**	**0.13**	<0.02	**0.13**	-	<0.02	**0.3**	**0.62**	**0.54**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW041	3/05/2024	EB2414902	**0.23**	**0.04**	**0.16**	<0.02	**0.33**	-	<0.02	**0.2**	**0.30**	**0.30**	<0.02	**0.01**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW042	6/02/2018	EB1803636	<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	<0.12
QLD_0861_PFAS	MW042	3/05/2019	EB1911342	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFAS	MW042	26/11/2019	EB1932183	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	28/04/2020	EB2011562	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	16/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW042	15/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	15/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	15/04/2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW042	26/10/2021	EB2130850	<0.02	<0.02	**0.03**	<0.02	**0.03**	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	26/10/2021	EB2130850	<0.04	<0.02	**0.04**	<0.02	**0.02**	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	26/10/2021	RN1333717	**0.012**	<0.01	**0.028**	<0.01	**0.04**	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW042	5/04/2022	EB2209951	<0.02	<0.02	<0.01	<0.02	<0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW042	26/10/2022	EB2231825	<0.02	<0.02	<0.02	<0.02	<0.13	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP_23	MW042	27/04/2023	EB2312761-AA	<0.02	<0.02	**0.02**	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW042	30/10/2023	EB2333887-AA	<0.02	<0.02	**0.01**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW042	19/04/2024	EB2413910	**0.02**	<0.02	**0.06**	<0.02	**0.15**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW043	22/02/2018	EB1804971	<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	<0.12
QLD_0861_PFAS	MW043	22/02/2018	EB1804971	<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	<0.12
QLD_0861_PFAS	MW043	3/05/2019	EB1911342	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFAS	MW043	26/11/2019	EB1932183	<0.02	<0.02	**0.05**	<0.02	**0.10**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW043	28/04/2020	EB2011562	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW043	16/10/2020	EB2027176-AA	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFASOMP	MW043	15/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW043	26/10/2021	EB2130850	**0.36**	**0.08**	**0.22**	<0.02	**0.27**	-	<0.02	**0.10**	**0.08**	**0.21**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW043	5/04/2022	EB2209951	**0.28**	**0.09**	**0.21**	<0.02	**0.18**	-	<0.02	<0.1	**0.08**	**0.14**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW043	25/10/2022	EB2231825	**0.04**	<0.02	**0.05**	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW043	25/10/2022	EB2231825	**0.06**	<0.02	**0.08**	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP	MW043	25/10/2022	RN1371573	**0.043**	**0.012**	**0.047**	<0.01	**0.048**	<0.01	<0.01	<0.05	<0.02	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW043	27/04/2023	EB2312761-AA	**0.20**	**0.07**	**0.30**	<0.02	**0.40**	-	<0.02	<0.1	**0.05**	**0.10**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW043	30/10/2023	EB2333887-AA	**0.05**	<0.02	**0.04**	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW043	19/04/2024	EB2413910	**0.21**	**0.06**	**0.22**	<0.02	**0.24**	-	<0.02	<0.1	<0.02	**0.08**	<0.02	**0.01**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW043		186049	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.2	<0.5	<2
QLD_0861_PFAS	MW044	6/02/2018	EB1803636	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW044	7/05/2019	EB1911948	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW044	27/11/2019	EB1932183	**0.03**	<0.02	**0.02**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	22/04/2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	15/10/2020	EB2027172	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	21/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	21/10/2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	1/04/2022	EB2209950	<0.02	<0.02	**0.01**	<0.02	<0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	1/04/2022	EB2209942	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW044	1/04/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW044	26/10/2022	EB2231825	<0.25	<0.25	<0.25	<0.25	<0.25	-	<0.25	<1.2	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.63
QLD_0861_PFASOMP	MW044	26/10/2022	EB2231825	<0.25	<0.25	<0.25	<0.25	<0.25	-	<0.25	<1.2	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.63
QLD_0861_PFASOMP	MW044	26/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW044	11/05/2023	EB2314270	<0.02	<0.02	**0.02**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW044	24/10/2023	EB2333887-AA	<0.03	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW044	24/10/2023	EB2333887-AA	<0.02	<0.02	**0.02**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW044	18/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW046	7/02/2018	EB1803867	**11.1**	**13.9**	**96.6**	**9.66**	**201**	-	<0.10	**7.7**	**16.3**	**46.1**	**11.9**	**23.7**	**0.56**	<0.10	<0.10	<0.10	<0.10	<0.25
QLD_0861_PFAS	MW046	7/02/2018	ES1806917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW046	6/05/2019	EB1911948	**16.7**	**17.2**	**129**	**9.86**	**288**	-	<0.20	**15.7**	**29.2**	**69.5**	**13.9**	**31.5**	**0.74**	<0.20	<0.20	<0.20	<0.20	<0.50
QLD_0861_FSBGME	MW046	25/06/2019	662866	**16**	**18**	**160**	**11**	**360**	<0.1	<0.1	**14**	**28**	**76**	**16**	**36**	**0.85**	**0.14**	<0.1	<0.1	<0.1	<0.1
QLD_0861_PFAS	MW046	18/11/2019	EB1931427	**18.1**	**19.4**	**130**	**8.65**	**200**	-	<0.02	**16.2**	**29.8**	**67.4**	**12.8**	**38.0**	**0.71**	**0.12**	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW046	27/04/2020	EB2011562	**18.6**	**17.4**	**122**	**9.24**	**251**	-	<1.62	<8.1	**27.6**	**62.0**	**13.0**	**32.4**	<1.62	<1.62	<1.62	<1.62	<1.62	<4.05
QLD_0861_PFASOMP	MW046	19/10/2020	EB2027539	**18.8**	**21.2**	**146**	**10.5**	**219**	-	<0.44	**16.6**	**33.9**	**85.4**	**17.1**	**39.1**	**0.62**	<0.44	<0.44	<0.44	<0.44	<1.11
QLD_0861_PFASOMP	MW046	19/10/2020	EB2027539	**18.9**	**20.0**	**139**	**11.8**	**242**	-	<0.18	**16.0**	**30.2**	**79.8**	**15.8**	**37.2**	**0.64**	<0.18	<0.18	<0.18	<0.18	<0.45
QLD_0861_PFASOMP	MW046	19/10/2020	RN1292508	**14**	**13**	**110**	**6.3**	**160**	<0.01	<0.01	**14**	**29**	**56**	**12**	**27**	**0.53**	**0.074**	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW046	20/04/2021	EB2111121	**18.5**	**29.1**	**127**	**13.6**	**293**	-	<0.05	**14.7**	**39.5**	**69.7**	**18.9**	**40.3**	**0.72**	**0.09**	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW046	26/10/2021	EB2130850	**12.5**	**11.6**	**83.4**	**6.70**	**194**	-	<0.50	**11.6**	**25.9**	**50.0**	**9.55**	**21.7**	<0.50	<0.50	<0.50	<0.50	<0.50	<1.25
QLD_0861_PFASOMP	MW046	30/03/2022	EB2209950	**12.3**	**11.8**	**85.0**	**7.15**	**179**	-	<0.25	**13.0**	**28.0**	**45.4**	**9.28**	**22.1**	**0.42**	<0.25	<0.25	<0.25	<0.25	<0.62
QLD_0861_PFASOMP	MW046	25/10/2022	EB2231825	**13.9**	**16.5**	**120**	**12.6**	**215**	-	<0.25	**17.8**	**34.9**	**74.8**	**12.7**	**31.6**	**0.66**	<0.25	<0.25	<0.25	<0.25	<0.63
QLD_0861_PFASOMP_23	MW046	17/04/2023	EB2312062-AA	**4.42**	**4.85**	**34.2**	**3.78**	**87.1**	-	<0.25	**5.5**	**12.5**	**16.9**	**3.90**	**7.75**	**0.25**	<0.25	<0.25	<0.25	<0.25	<0.62
QLD_0861_PFASOMP_23	MW046	31/10/2023	EB2333887-AA	**7.25**	**7.52**	**52.4**	**6.28**	**195**	-	<0.25	**9.6**	**20.4**	**27.0**	**5.88**	**14.2**	**0.50**	<0.25	<0.25	<0.25	<0.25	<0.62
QLD_0861_PFASOMP_24	MW046	15/04/2024	EB2413910	**1.29**	**1.29**	**9.48**	**0.99**	**26.8**	-	<0.05	**3.7**	**5.04**	**5.03**	**1.13**	**2.18**	**0.09**	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFAS	MW047	15/01/2018	EB1802042	**0.03**	<0.02	**0.10**	<0.02	**0.41**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW047	6/04/2018	EB1808673	<0.02	<0.02	**0.07**	<0.02	**0.23**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW047	6/04/2018	EB1810410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW047	2/05/2019	EB1911342	<0.02	<0.02	<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	<0.02	<0.05
QLD_0861_PFAS	MW047	21/11/2019	EB1931427	**0.02**	<0.02	**0.03**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW047	23/04/2020	EB2011246-AC	**0.75**	**0.9**	**7.67**	**0.42**	**5.87**	-	<0.04	<0.2	**0.2**	**1.05**	**0.13**	**0.26**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.1
QLD_0861_PFASOMP	MW047	23/04/2020	EB2011246-AC	**0.82**	**0.79**	**7.08**	**0.37**	**6.17**	-	<0.03	<0.2	**0.17**	**0.99**	**0.12**	**0.26**	<0.03	<0.03	<0.03	<0.03	<0.03	<0.08
QLD_0861_PFASOMP	MW047	23/04/2020	RN1274652	**0.65**	**0.62**	**5.4**	**0.32**	**3.5**	<0.01	<0.01	**0.13**	**0.17**	**0.86**	**0.092**	**0.2**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW047	12/10/2020	EB2027172	**0.11**	**0.08**	**0.64**	**0.02**	**0.89**	-	<0.02	<0.10	**0.02**	**0.09**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW047	12/10/2020	EB2027176-AA	**0.11**	**0.10**	**0.76**	**0.03**	**0.95**	-	<0.02	<0.10	**0.03**	**0.12**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW047	12/10/2020	RN1292028	**0.1**	**0.08**	**0.74**	**0.026**	**0.87**	<0.01	<0.01	<0.05	**0.022**	**0.1**	**0.011**	**0.018**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW047	20/04/2021	EB2111121	**0.22**	**0.19**	**0.18**	**0.08**	**2.46**	-	<0.02	**0.2**	**0.19**	**0.24**	<0.02	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW047	20/04/2021	EB2111121	**0.07**	**0.04**	**0.20**	<0.02	**0.44**	-	<0.02	<0.1	**0.03**	**0.04**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW047	20/04/2021	RN1313031	**0.21**	**0.1**	**1**	**0.05**	**1.8**	<0.01	<0.01	**0.19**	**0.14**	**0.16**	**0.01**	**0.025**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP	MW047	26/10/2021	EB2130850	**1.58**	**0.67**	**3.58**	**0.23**	**5.21**	-	<0.02	**0.72**	**0.82**	**1.58**	**0.03**	**0.07**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW047	30/03/2022	EB2209950	**0.86**	**0.64**	**4.01**	**0.16**	**2.84**	-	<0.02	**0.3**	**0.40**	**1.03**	**0.10**	**0.17**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water															0.56						
PFAS NEMP 2020 Freshwater 95%								0.13							220						
PFAS NEMP 2020 Freshwater 99%								0.00023							19						
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFASOMP	MW047	30/03/2022	EB2209942	**1.51**	**2.88**	**20.9**	**1.64**	**50.2**	-	*<0.05*	**0.4**	**0.64**	**2.73**	**0.93**	**2.37**	**0.08**	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.12*
QLD_0861_PFASOMP	MW047	30/03/2022	RN1349008	**1.1**	**1.6**	**19**	**1.1**	**30**	**0.039**	*<0.01*	**0.3**	**0.52**	**2.2**	**0.52**	**1.5**	**0.035**	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*
QLD_0861_PFASOMP	MW047	25/10/2022	EB2231825	**1.45**	**1.39**	**10.3**	**0.52**	**6.38**	-	*<0.02*	**0.5**	**0.60**	**2.64**	**0.24**	**0.52**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.06*
QLD_0861_PFASOMP_23	MW047	19/04/2023	EB2312062-AA	**1.03**	**1.28**	**6.55**	**0.43**	**4.24**	-	*<0.02*	**0.4**	**0.60**	**1.44**	**0.15**	**0.32**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW047	26/10/2023	EB2333887-AA	*<0.07*	**0.05**	**0.42**	**0.03**	**0.68**	-	*<0.02*	*<0.1*	*<0.02*	**0.03**	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW047	26/10/2023	EB2333887-AA	**0.06**	**0.05**	**0.51**	**0.04**	**0.84**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW047	26/10/2023	RN1410504	**0.048**	**0.046**	**0.57**	**0.03**	**0.81**	*<0.01*	*<0.01*	*<0.05*	*<0.02*	**0.032**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*
QLD_0861_PFASOMP_24	MW047	15/04/2024	EB2413910	**0.98**	**0.85**	**7.62**	**0.37**	**7.85**	-	*<0.02*	**0.5**	**0.54**	**1.29**	**0.13**	**0.29**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW048	5/02/2018	EB1803636	**1.65**	**1.35**	**10.5**	**0.61**	**15.8**	-	*<0.02*	**0.3**	**0.52**	**2.33**	**0.34**	**0.65**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW048	5/02/2018	ES1806917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW048	30/04/2019	EB1911342	**1.10**	**1.11**	**8.19**	**0.32**	**9.42**	-	*<0.02*	**0.2**	**0.35**	**1.48**	**0.20**	**0.31**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW048	30/04/2019	EB1911342	**1.11**	**1.12**	**8.08**	**0.33**	**10.1**	-	*<0.02*	**0.2**	**0.36**	**1.50**	**0.21**	**0.32**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW048	30/04/2019	217104	**1.3**	**1.6**	**8.8**	**0.37**	**11**	-	*<0.02*	**0.36**	**0.40**	**1.6**	**0.25**	**0.47**	*<0.01*	*<0.02*	*<0.02*	*<0.05*	*<0.1*	*<0.5*
QLD_0861_PFAS	MW048	18/11/2019	EB1931427	**0.97**	**0.96**	**7.53**	**0.30**	**10.0**	-	*<0.02*	**0.2**	**0.32**	**1.27**	**0.20**	**0.30**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW048	24/04/2020	EB2011246-AC	**0.9**	**1.01**	**6.79**	**0.33**	**9.63**	-	*<0.04*	**0.2**	**0.32**	**1.23**	**0.18**	**0.29**	*<0.04*	*<0.04*	*<0.04*	*<0.04*	*<0.04*	*<0.1*
QLD_0861_PFASOMP	MW048	12/10/2020	EB2027172	**0.82**	**0.84**	**6.01**	**0.28**	**8.66**	-	*<0.05*	**0.38**	**0.34**	**1.20**	**0.18**	**0.30**	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.12*
QLD_0861_PFASOMP	MW048	16/04/2021	EB2111121	**0.47**	**0.47**	**3.22**	**0.14**	**4.77**	-	*<0.02*	**0.1**	**0.18**	**0.60**	**0.09**	**0.15**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW048	21/10/2021	EB2130835	**0.12**	**0.09**	**0.74**	**0.03**	**1.60**	-	*<0.02*	*<0.10*	**0.04**	**0.16**	*<0.02*	**0.04**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW048	29/03/2022	EB2209950	**0.37**	**0.33**	**2.19**	**0.13**	**2.96**	-	*<0.02*	*<0.1*	**0.12**	**0.44**	**0.06**	**0.13**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW048	25/10/2022	EB2231825	**0.86**	**1.01**	**7.46**	**0.32**	**13.4**	-	*<0.10*	*<0.5*	**0.24**	**1.37**	**0.14**	**0.26**	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.25*
QLD_0861_PFASOMP_23	MW048	17/04/2023	EB2312062-AA	**0.39**	**0.45**	**2.97**	**0.16**	**5.66**	-	*<0.02*	*<0.1*	**0.14**	**0.45**	**0.08**	**0.12**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW048	26/10/2023	EB2333887-AA	**0.48**	**0.50**	**3.43**	**0.16**	**5.62**	-	*<0.02*	*<0.1*	**0.14**	**0.52**	**0.08**	**0.15**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW048	26/10/2023	EB2333887-AA	**0.44**	**0.53**	**3.53**	**0.19**	**6.52**	-	*<0.02*	**0.1**	**0.15**	**0.49**	**0.08**	**0.10**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW048	26/10/2023	RN1410504	**0.43**	**0.37**	**2.7**	**0.12**	**4.8**	*<0.01*	*<0.01*	**0.13**	**0.14**	**0.46**	**0.063**	**0.11**	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*
QLD_0861_PFASOMP_24	MW048	19/04/2024	EB2413910	**0.14**	**0.14**	**1.13**	**0.04**	**1.50**	-	*<0.02*	*<0.1*	**0.03**	**0.14**	*<0.02*	**0.03**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	5/02/2018	EB1803636	**4.05**	**2.76**	**19.2**	**0.94**	**27.5**	-	*<0.02*	**1.5**	**1.52**	**6.30**	**0.82**	**1.68**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	5/02/2018	ES1806917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW049	5/02/2018	EB1803636	**4.01**	**2.58**	**15.9**	**0.87**	**24.2**	-	*<0.02*	**1.6**	**1.60**	**6.65**	**0.88**	**1.71**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	5/02/2018	EB1803636	**3.91**	**2.63**	**17.6**	**0.86**	**26.9**	-	*<0.02*	**1.5**	**1.53**	**6.49**	**0.89**	**1.76**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	30/04/2019	EB1911342	**3.39**	**2.60**	**16.3**	**0.52**	**27.2**	-	*<0.02*	**1.3**	**1.35**	**5.05**	**0.53**	**0.88**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	18/11/2019	EB1931427	**2.65**	**2.14**	**11.2**	**0.44**	**21.0**	-	*<0.02*	**1.2**	**1.11**	**4.04**	**0.48**	**0.77**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	18/11/2019	EB1931427	**2.67**	**2.09**	**11.0**	**0.41**	**21.2**	-	*<0.02*	**1.1**	**1.12**	**3.92**	**0.48**	**0.78**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW049	19/11/2019	231783	**2.5**	**1.6**	**10**	**0.45**	**21**	-	*<0.02*	**1.2**	**1.0**	**3.6**	**0.46**	**0.78**	*<0.01*	*<0.02*	*<0.02*	*<0.05*	*<0.1*	*<0.5*
QLD_0861_PFASOMP	MW049	24/04/2020	EB2011246-AC	**1.53**	**1.41**	**8.3**	**0.39**	**15.2**	-	*<0.03*	**0.2**	**0.54**	**2.21**	**0.3**	**0.6**	*<0.03*	*<0.03*	*<0.03*	*<0.03*	*<0.03*	*<0.08*
QLD_0861_PFASOMP	MW049	12/10/2020	EB2027172	**1.80**	**1.46**	**8.78**	**0.40**	**11.3**	-	*<0.05*	**1.31**	**0.86**	**3.02**	**0.39**	**0.76**	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.12*
QLD_0861_PFASOMP	MW049	21/10/2021	EB2130835	**1.93**	**1.81**	**10.5**	**0.51**	**15.4**	-	*<0.02*	**0.8**	**0.90**	**3.49**	**0.41**	**1.07**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW049	7/04/2022	EB2209951	**0.42**	**0.36**	**1.68**	**0.08**	**3.15**	-	*<0.02*	**0.2**	**0.18**	**0.57**	**0.08**	**0.16**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW049	25/10/2022	EB2231825	**1.49**	**1.17**	**5.68**	**0.22**	**10.2**	-	*<0.02*	**0.6**	**0.61**	**2.55**	**0.28**	**0.40**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.06*
QLD_0861_PFAS	MW050	5/02/2018	EB1803636	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW050	30/04/2019	EB1911342	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW050	25/11/2019	EB1932183	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW050	24/04/2020	EB2011246-AC	*<0.02*	*<0.02*	*<0.02*	*<0.02*	**0.02**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW050	24/04/2020	RN1274652	*<0.01*	*<0.01*	*<0.01*	*<0.01*	**0.024**	*<0.01*	*<0.01*	*<0.05*	*<0.02*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*
QLD_0861_PFASOMP	MW050	12/10/2020	EB2027208-AB	*<0.02*	*<0.02*	*<0.02*	*<0.02*	**0.01**	-	*<0.02*	*<0.10*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW050	21/04/2021	EB2111121	**0.03**	*<0.02*	**0.07**	*<0.02*	**0.23**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW050	28/10/2021	EB2130850	**0.02**	*<0.02*	**0.07**	*<0.02*	**0.11**	-	*<0.02*	*<0.1*	*<0.02*	**0.04**	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW050	30/03/2022	EB2209950	*<0.02*	*<0.02*	**0.01**	*<0.02*	**0.07**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW050	24/10/2022	EB2231825	*<0.02*	*<0.02*	**0.07**	*<0.02*	**0.10**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.06*
QLD_0861_PFASOMP_23	MW050	17/04/2023	EB2312062-AA	**0.04**	**0.02**	**0.13**	*<0.02*	**0.22**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW050	17/04/2023	EB2312062-AA	**0.04**	**0.02**	**0.12**	*<0.02*	**0.22**	-	*<0.02*	*<0.1*	*<0.02*	**0.02**	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW050	17/04/2023	RN1393124	**0.028**	**0.014**	**0.084**	*<0.01*	**0.16**	*<0.01*	*<0.01*	*<0.05*	*<0.02*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*
QLD_0861_PFASOMP_23	MW050	28/10/2023	EB2333894-AA	**0.04**	*<0.02*	**0.10**	*<0.02*	**0.22**	*<0.02*	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_24	MW050	19/04/2024	EB2413910	**0.03**	*<0.02*	**0.07**	*<0.02*	**0.15**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054D	21/02/2018	EB1804971	*<0.02*	*<0.02*	*<0.02*	*<0.02*	**0.07**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054D	5/04/2018	EB1808672	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054D	9/05/2019	EB1911948	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054D	9/05/2019	EB1911948	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054D	9/05/2019	217521	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	-	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*	*<0.05*	*<0.1*	*<0.5*
QLD_0861_PFAS	MW054D	28/11/2019	EB1932183	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054D	24/04/2020	EB2011246-AD	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054D	23/10/2020	EB2027834	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.10*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054D	21/04/2021	EB2111111	*<0.02*	*<0.02*	*<0.02*	*<0.02*	**0.01**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054D	28/10/2021	EB2130821	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054D	5/04/2022	EB2209940	*<0.02*	*<0.02*	*<0.03*	*<0.02*	*<0.05*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.06*
QLD_0861_PFASOMP	MW054D	9/11/2022	EB2233627	*<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*	*<0.06*
QLD_0861_PFASOMP_23	MW054D	26/04/2023	EB2312770	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW054D	26/10/2023	EB2333895	*<0.02*	*<0.02*	**0.02**	*<0.02*	**0.02**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_24	MW054D	16/04/2024	EB2413937	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054S	21/02/2018	EB1804971	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	**0.03**	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054S	5/04/2018	EB1808672	*<0.02*	*<0.02*	**0.02**	*<0.02*	**0.04**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054S	9/05/2019	EB1911948	*<0.02*	*<0.02*	*<0.02*	*<0.02*	**0.02**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW054S	28/11/2019	EB1932183	*<0.02*	*<0.02*	*<0.02*	*<0.02*	**0.02**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054S	24/04/2020	EB2011246-AD	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	-	*<0.10*	*<0.50*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.25*
QLD_0861_PFASOMP	MW054S	24/04/2020	EB2011246-AD	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	-	*<0.10*	*<0.50*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.10*	*<0.25*
QLD_0861_PFASOMP	MW054S	24/04/2020	RN1274651	*<0.01*	*<0.01*	**0.061**	*<0.01*	**0.08**	*<0.01*	*<0.01*	*<0.05*	*<0.02*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.01*	*<0.02*	*<0.02*
QLD_0861_PFASOMP	MW054S	21/04/2021	EB2111111	*<0.05*	*<0.02*	*<0.02*	*<0.02*	**0.10**	-	*<0.02*	*<0.2*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054S	28/10/2021	EB2130821	*<0.05*	*<0.05*	*<0.05*	*<0.05*	**0.07**	-	*<0.05*	*<0.25*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.12*
QLD_0861_PFASOMP	MW054S	5/04/2022	EB2209940	*<0.02*	*<0.02*	**0.08**	*<0.02*	**0.16**	-	*<0.02*	*<0.1*	*<0.02*	**0.03**	*<0.02*	**0.01**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP	MW054S	9/11/2022	EB2233627	**0.03**	**0.03**	**0.20**	*<0.02*	**0.18**	-	*<0.02*	*<0.1*	*<0.02*	**0.03**	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW054S	26/04/2023	EB2312770	*<0.04*	**0.02**	**0.16**	*<0.02*	**0.19**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	**0.01**	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_23	MW054S	26/10/2023	EB2333895	**0.03**	*<0.02*	**0.14**	*<0.02*	**0.13**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFASOMP_24	MW054S	16/04/2024	EB2413937	*<0.02*	*<0.02*	**0.09**	*<0.02*	**0.13**	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW055D	9/03/2018	EB1806399	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW055D	6/04/2018	EB1808673	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	-	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*
QLD_0861_PFAS	MW055D	2/05/2019	EB1911342	*<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*	*<0.05*

TABLE A2: Groundwater Analytical Summary

	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	0.0005	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
PFAS NEMP 2020 Drinking Water												0.56						
PFAS NEMP 2020 Freshwater 95%					0.13							220						
PFAS NEMP 2020 Freshwater 99%					0.00023							19						

Project ID	Location Code	Date	Lab Report Number																
QLD_0861_PFASOMP	MW056I	22/04/2020	EB2011255	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056I	15/10/2020	EB2027208-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056I	15/04/2021	EB2111112	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056I	22/10/2021	EB2130815	<0.02	<0.02	<0.01	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056I	29/03/2022	EB2209946	<0.02	<0.02	**0.02**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW056I	18/04/2023	EB2312057	<0.02	<0.02	**0.01**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW056I	30/10/2023	EB2333894-AB	<0.02	<0.02	**0.02**	<0.02	**0.01**	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW056I	16/04/2024	EB2413946	<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	<0.06
QLD_0861_PFAS	MW056S	21/02/2018	EB1804971	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW056S	5/04/2018	EB1808674	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW056S	9/05/2019	EB1911948	<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	<0.05
QLD_0861_PFAS	MW056S	28/11/2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	22/04/2020	EB2011255	<0.02	<0.02	<0.02	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	15/10/2020	EB2027208-AA	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	15/04/2021	EB2111112	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	22/10/2021	EB2130815	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	29/03/2022	EB2209946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	29/03/2022	EB2209942	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW056S	29/03/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.017**	<0.02	**0.02**
QLD_0861_PFASOMP_23	MW056S	26/10/2023	EB2333898	<0.02	<0.02	<0.01	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW056S	16/04/2024	EB2413946	<0.02	<0.02	<0.01	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW056S	16/04/2024	EB2413950	<0.02	<0.02	<0.01	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW056S	16/04/2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFAS	MW057I	22/02/2018	EB1804971	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057I	6/04/2018	EB1808674	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057I	6/04/2018	EB1808675	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057I	6/04/2018	189173	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.1	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW057I	14/05/2019	EB1912390	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057I	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057I	14/05/2019	EB1912390	<0.02	<0.02	<0.02	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057I	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057I	28/11/2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	28/04/2020	EB2011568	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	15/10/2020	EB2027208-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	21/04/2021	EB2111112	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	22/10/2021	EB2130815	**0.14**	**0.09**	**0.41**	<0.02	**0.08**	-	<0.02	<0.1	<0.02	**0.08**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	26/11/2021	EB2134318	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	4/04/2022	EB2209946	<0.02	<0.02	**0.01**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057I	26/10/2022	EB2231850	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW057I	19/04/2023	EB2312057	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW057I	29/11/2023	EB2337879-AB	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW057I	3/05/2024	EB2414909	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057S	22/02/2018	EB1804971	**0.12**	**0.08**	**0.13**	<0.02	**0.04**	-	<0.02	<0.1	<0.02	**0.02**	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057S	6/04/2018	EB1808674	**0.08**	**0.06**	**0.16**	<0.02	**0.04**	-	<0.02	<0.1	**0.04**	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057S	14/05/2019	EB1912390	**0.08**	**0.04**	**0.10**	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW057S	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057S	28/11/2019	EB1932183	**0.12**	**0.05**	**0.09**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	28/04/2020	EB2011568	**0.02**	<0.02	**0.04**	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	15/10/2020	EB2027208-AA	**0.09**	**0.05**	**0.07**	<0.02	**0.04**	-	<0.02	<0.10	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	21/04/2021	EB2111112	**0.02**	<0.02	**0.05**	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	22/10/2021	EB2130815	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	26/11/2021	EB2134318	**0.02**	<0.02	**0.04**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	4/04/2022	EB2209946	**0.12**	**0.09**	**0.42**	<0.02	**0.25**	-	<0.02	<0.1	**0.02**	**0.09**	**0.02**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	4/04/2022	EB2209942	**0.14**	**0.12**	**0.48**	<0.02	**0.28**	-	<0.02	<0.1	**0.03**	**0.10**	<0.02	**0.05**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW057S	4/04/2022	RN1349008	**0.099**	**0.075**	**0.38**	<0.01	**0.12**	<0.01	<0.01	<0.05	**0.021**	**0.077**	**0.013**	**0.023**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02

TABLE A2: Groundwater Analytical Summary

				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.0005	0.0005	0.0005	0.0002	0.01	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
PFAS NEMP 2020 Drinking Water															0.56							
PFAS NEMP 2020 Freshwater 95%								0.13							220							
PFAS NEMP 2020 Freshwater 99%								0.00023							19							
Project ID	**Location Code**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP	MW057S	26/10/2022	EB2231850	**0.37**	**0.31**	**1.54**	**0.07**	**1.03**	-	<0.02	**0.1**	**0.06**	**0.33**	**0.05**	**0.11**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06
QLD_0861_PFASOMP_23	MW057S	19/04/2023	EB2312057	**0.28**	**0.21**	**0.97**	**0.02**	**0.28**	-	<0.02	**0.1**	**0.04**	**0.19**	**0.03**	**0.06**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW057S	19/04/2023	EB2312062-AA	**0.29**	**0.25**	**0.90**	**0.03**	**0.30**	-	<0.02	<0.1	**0.04**	**0.15**	**0.04**	**0.07**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW057S	19/04/2023	RN1393124	**0.25**	**0.18**	**0.81**	<0.01	**0.17**	<0.01	<0.01	**0.093**	**0.031**	**0.15**	**0.024**	**0.039**	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW057S	29/11/2023	EB2337879-AB	**0.27**	**0.19**	**0.76**	**0.03**	**0.35**	-	<0.02	<0.1	**0.02**	**0.05**	<0.02	**0.05**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW057S	3/05/2024	EB2414909	**0.07**	**0.06**	**0.27**	<0.02	**0.15**	-	<0.02	<0.1	<0.02	**0.02**	<0.02	**0.01**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFAS	MW309	2/05/2019	217104	**0.1**	**0.14**	**0.80**	**0.07**	**0.58**	-	<0.02	**0.02**	<0.02	**0.08**	**0.01**	**0.04**	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5
QLD_0861_PFAS	MW309	8/05/2019	EB1911948	<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	<0.05
QLD_0861_PFAS	MW309	8/05/2019	EB1911948	<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	<0.05
QLD_0861_PFAS	MW309	27/11/2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW309	27/04/2020	EB2011562	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW309	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12
QLD_0861_PFASOMP	MW309	20/04/2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW309	26/10/2021	EB2130850	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP	MW309	30/03/2022	EB2209950	<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	<0.06
QLD_0861_PFASOMP	MW309	25/10/2022	EB2231825	<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	<0.06
QLD_0861_PFASOMP_23	MW309	20/04/2023	EB2312062-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW309	20/04/2023	EB2312062-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_23	MW309	20/04/2023	RN1393124	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
QLD_0861_PFASOMP_23	MW309	27/10/2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW309	15/04/2024	EB2413910	<0.02	<0.02	<0.01	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW535	11/07/2024	EB2423759	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW536	11/07/2024	EB2423759	**0.10**	**0.10**	**0.62**	**0.02**	**0.94**	-	<0.02	**0.1**	**0.20**	**0.24**	**0.07**	**0.08**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW537	11/07/2024	EB2423759	**0.34**	**0.19**	**0.26**	<0.02	**0.18**	-	<0.02	**0.2**	**0.12**	**0.38**	**0.03**	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW538	11/07/2024	EB2423759	<0.02	<0.02	**0.05**	<0.02	<0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW539	11/07/2024	EB2423759	**3.73**	**2.44**	**4.26**	<0.02	<0.01	-	<0.02	**0.6**	**0.88**	**3.85**	**0.28**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05
QLD_0861_PFASOMP_24	MW539	11/07/2024	EB2423759	**3.96**	**2.30**	**4.10**	<0.02	<0.01	-	<0.02	**0.6**	**0.90**	**3.87**	**0.27**	**0.04**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05

Environmental Standards

HEPA, January 2020, PFAS NEMP 2020 Drinking Water

HEPA, January 2020, PFAS NEMP 2020 Freshwater 95%

HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

TABLE A2: Groundwater Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
				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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorotetradecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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				0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water															0.07						
PFAS NEMP 2020 Freshwater 95%																					
PFAS NEMP 2020 Freshwater 99%																					
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFAS	MW002	8/02/2018	EB1803867	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW002	20/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<4.32	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFASOMP	MW002	21/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW002	21/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW002	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFASOMP	MW002	13/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW002	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW002	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW002	21/10/2021	RN1333717	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW002	31/03/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW002	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW002	22/05/2023	EB2315514	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW002	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW002	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.02**	-	-	**0.02**	-
QLD_Hist_202012-3	MW005	17/12/2008	EB0817911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220058	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	EB1226948	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	EB1226948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	16/10/2012	356076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	11/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	11/02/2013	EB1303337	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	27/08/2013	EB1320742	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW005	28/02/2017	EB1703884	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_Hist_202012-3	MW005	12/10/2017	EB1721110	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW005	7/05/2019	EB1911948	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.41**	-	**0.52**	-	-	**0.52**	-
QLD_0861_PFAS	MW005	7/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.29**	-	**0.34**	-	-	**0.34**	-
QLD_0861_PFAS	MW005	7/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.29**	-	**0.34**	-	-	**0.34**	-
QLD_0861_PFAS	MW005	7/05/2019	217521	<0.01	**0.04**	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**0.41**	-	-	-	-	**0.49**	-
QLD_0861_PFAS	MW005	19/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP	MW005	23/04/2020	EB2011246-AC	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFASOMP	MW005	16/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW005	16/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW005	16/10/2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW005	21/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW005	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.05**	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFASOMP	MW005	6/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	MW005	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP_23	MW005	21/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP_23	MW005	28/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_23	MW005	28/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW005	30/10/2023	EB2333894-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP_24	MW005	15/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_Hist_202012-3	MW006	17/12/2008	EB0817911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220053	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	30/07/2012	EB1220055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	15/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	15/10/2012	EB1226844	-	**0.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	16/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	22/01/2013	EB1301359	-	**1.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	27/08/2013	EB1320742	-	**1.2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	21/02/2017	EB1703368	<0.05	**0.29**	<0.05	<0.05	**0.18**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**172**	-	**189**	-	-	**194**	-
QLD_Hist_202012-3	MW006	21/02/2017	EB1703368	<0.05	**0.28**	<0.05	<0.05	**0.17**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**187**	-	**203**	-	-	**208**	-
QLD_Hist_202012-3	MW006	21/02/2017	535101	<0.3	<1.5	<0.3	-	<1.5	-	<1.5	-	-	<1.5	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW006	10/10/2017	EB1720882	<0.05	**0.31**	<0.05	<0.05	**0.21**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**167**	-	**181**	-	-	**185**	-
QLD_0861_PFAS	MW006	13/05/2019	EB1912390	<0.05	**0.33**	**0.07**	<0.05	**0.26**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**76.1**	-	**84.0**	-	-	**86.0**	-
QLD_0861_PFAS	MW006	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW006	3/12/2019	EB1932627	<0.24	**0.27**	<0.24	<0.24	<0.24	<0.61	<0.24	<0.61	<0.61	<0.24	<0.61	**88.8**	-	**94.8**	-	-	**96.5**	-
QLD_0861_PFASOMP	MW006	22/04/2020	EB2011246-AC	<0.16	**0.4**	<0.16	<0.16	<0.16	<0.4	<0.16	<0.4	<0.4	<0.16	<0.4	**57.4**	-	**63.5**	-	-	**65**	-
QLD_0861_PFASOMP	MW006	22/04/2020	EB2011246-AC	<0.16	**0.47**	<0.16	<0.16	<0.16	<0.4	<0.16	<0.4	<0.4	<0.16	<0.4	**64.2**	-	**71.2**	-	-	**72.7**	-
QLD_0861_PFASOMP	MW006	22/04/2020	RN1274652	<0.01	**0.41**	**0.032**	<0.01	**0.16**	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW006	21/10/2020	EB2027539	<0.08	**0.29**	<0.08	<0.08	**0.23**	<0.20	<0.08	<0.20	<0.20	<0.08	<0.20	**54.0**	-	**62.5**	-	-	**64.3**	-
QLD_0861_PFASOMP	MW006	21/10/2020	EB2027539	<0.17	**0.90**	<0.17	<0.17	**0.34**	<0.43	<0.17	<0.43	<0.43	<0.17	<0.43	**56.3**	-	**65.0**	-	-	**66.9**	-
QLD_0861_PFASOMP	MW006	21/10/2020	RN1292508	<0.01	**0.31**	**0.049**	<0.01	**0.13**	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW006	21/04/2021	EB2111121	<0.05	**0.36**	**0.06**	<0.05	**0.35**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**55.1**	-	**64.3**	-	-	**67.3**	-
QLD_0861_PFASOMP	MW006	27/10/2021	EB2130850	<0.10	**0.37**	<0.10	<0.10	**0.10**	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**52.7**	-	**62.3**	-	-	**64.0**	-
QLD_0861_PFASOMP	MW006	7/04/2022	EB2209951	<0.05	**0.39**	<0.05	<0.05	**0.28**	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**52.5**	-	**63.2**	-	-	**65.8**	-
QLD_0861_PFASOMP	MW006	26/10/2022	EB2231825	<0.05	**0.42**	<0.05	<0.05	**0.22**	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**56.7**	-	**68.7**	-	-	**71.3**	-
QLD_0861_PFASOMP_23	MW006	26/04/2023	EB2312761-AA	<0.05	**0.55**	<0.05	<0.05	**0.13**	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**55.2**	-	**68.4**	-	-	**71.4**	-
QLD_0861_PFASOMP_23	MW006	29/11/2023	EB2337879-AA	<0.10	**0.43**	<0.10	<0.10	**0.20**	<0.24	<0.10	<0.24	<0.24	<0.10	<0.24	**48.1**	-	**59.7**	-	-	**62.6**	-
QLD_0861_PFASOMP_24	MW006	18/04/2024	EB2413910	<0.10	**0.51**	<0.10	<0.10	**0.17**	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**68.6**	-	**84.2**	-	-	**89.9**	-
QLD_Hist_202012-3	MW007	17/12/2008	EB0817911	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219768	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219769	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219816	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	26/07/2012	EB1219816	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	15/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	15/10/2012	EB1226844	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	16/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	22/01/2013	EB1301359	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	27/08/2013	EB1320742	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A2: Groundwater Analytical Summary

	PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorotetradecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water												0.07						
PFAS NEMP 2020 Freshwater 95%																		
PFAS NEMP 2020 Freshwater 99%																		

Project ID	Location Code	Date	Lab Report Number																
QLD_Hist_202012-3	MW007	22/02/2017	EB1703481	<0.05	**0.24**	<0.05	<0.05	**1.62**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**109**	-	**121**	-	-	**127**	-
QLD_Hist_202012-3	MW007	11/10/2017	EB1721001	<0.05	**0.23**	<0.05	<0.05	**0.32**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**73.3**	-	**81.9**	-	-	**86.2**	-
QLD_Hist_202012-3	MW007	12/10/2017	EB1721110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW007	12/10/2017	EB1721110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW007	13/05/2019	EB1912390	<0.05	**0.14**	<0.05	<0.05	**0.57**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**49.7**	-	**56.5**	-	-	**60.6**	-
QLD_0861_PFAS	MW007	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW007	13/05/2019	EB1912390	<0.05	**0.16**	<0.05	<0.05	**0.59**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**51.2**	-	**58.1**	-	-	**62.2**	-
QLD_0861_PFAS	MW007	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_FSBGME	MW007	25/06/2019	662866	<0.01	**0.25**	<0.01	<0.01	**0.56**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**98**	-	**105.96**	-	-	**110.22**	-
QLD_0861_PFAS	MW007	3/12/2019	232657	<0.01	**0.20**	<0.01	<0.01	**0.5**	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**51**	-	-	-	-	**64**	-
QLD_0861_PFAS	MW007	3/12/2019	EB1932627	<0.24	<0.24	<0.24	<0.24	**0.29**	<0.60	<0.24	<0.60	<0.60	<0.24	<0.60	**49.8**	-	**55.5**	-	-	**59.2**	-
QLD_0861_PFAS	MW007	3/12/2019	EB1932627	<0.05	**0.18**	<0.05	<0.05	**0.48**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**56.1**	-	**64.4**	-	-	**69.0**	-
QLD_0861_PFASOMP	MW007	28/04/2020	EB2011562	<0.06	**0.18**	<0.06	<0.06	**0.14**	<0.16	<0.06	<0.16	<0.16	<0.06	<0.16	**51.8**	-	**59.8**	-	-	**63.5**	-
QLD_0861_PFASOMP	MW007	19/10/2020	EB2027539	<0.05	**0.12**	<0.05	<0.05	**0.51**	<0.10	<0.04	<0.10	<0.10	<0.04	<0.10	**47.7**	-	**57.5**	-	-	**61.8**	-
QLD_0861_PFASOMP	MW007	19/10/2020	EB2027539	<0.20	**1.74**	<0.20	<0.20	**0.50**	<0.50	<0.20	<0.50	<0.50	<0.20	<0.50	**44.4**	-	**54.8**	-	-	**58.9**	-
QLD_0861_PFASOMP	MW007	19/10/2020	RN1292508	<0.01	**0.13**	<0.01	<0.01	**0.12**	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW007	19/04/2021	EB2111121	<0.05	**0.14**	<0.05	<0.05	**0.53**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**48.4**	-	**57.4**	-	-	**62.6**	-
QLD_0861_PFASOMP	MW007	27/10/2021	EB2130850	<0.05	<0.15	<0.05	<0.05	<0.48	<0.09	<0.04	<0.09	<0.09	<0.04	<0.09	**53.4**	-	**62.5**	-	-	**66.3**	-
QLD_0861_PFASOMP	MW007	27/10/2021	EB2130850	<0.05	**0.12**	<0.05	<0.05	<0.42	<0.11	<0.04	<0.11	<0.11	<0.04	<0.11	**51.7**	-	**60.9**	-	-	**64.8**	-
QLD_0861_PFASOMP	MW007	27/10/2021	RN1333717	<0.01	**0.085**	<0.01	<0.01	**0.13**	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW007	6/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	**0.10**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**5.95**	-	**6.65**	-	-	**7.04**	-
QLD_0861_PFASOMP	MW007	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	**0.06**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**16.4**	-	**22.8**	-	-	**25.0**	-
QLD_0861_PFASOMP_23	MW007	21/04/2023	EB2312062-AA	<0.05	**0.05**	<0.05	<0.05	**0.09**	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**22.2**	-	**29.3**	-	-	**32.1**	-
QLD_0861_PFASOMP_23	MW007	29/11/2023	EB2337879-AA	<0.05	**0.13**	<0.05	<0.05	**0.06**	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**21.1**	-	**26.6**	-	-	**28.8**	-
QLD_0861_PFASOMP_24	MW007	18/04/2024	EB2413910	<0.05	**0.11**	<0.05	<0.05	**0.11**	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**33.9**	-	**40.4**	-	-	**43.7**	-
QLD_Hist_202012-3	MW008	17/12/2008	EB0817911																		
QLD_Hist_202012-3	MW008	26/07/2012	EB1219768		<0.1																
QLD_Hist_202012-3	MW008	26/07/2012	EB1219769																		
QLD_Hist_202012-3	MW008	26/07/2012	EB1219816																		
QLD_Hist_202012-3	MW008	15/10/2012	EB1226401																		
QLD_Hist_202012-3	MW008	15/10/2012	EB1226844		<0.1																
QLD_Hist_202012-3	MW008	16/01/2013	EB1301014																		
QLD_Hist_202012-3	MW008	22/01/2013	EB1301359		<0.1																
QLD_Hist_202012-3	MW008	26/08/2013	EB1320549		<0.1																
QLD_0861_PFAS	MW008	16/01/2018	EB1802042	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.14		0.14			0.14	
QLD_0861_PFAS	MW008	1/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01		<0.01			<0.01	
QLD_Hist_202012-3	MW009	17/12/2008	EB0817911																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219635																		
QLD_Hist_202012-3	MW009	25/07/2012	345940																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219635		<0.1																
QLD_Hist_202012-3	MW009	25/07/2012	EB1219644																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219646																		
QLD_Hist_202012-3	MW009	25/07/2012	EB1219646																		
QLD_Hist_202012-3	MW009	15/10/2012	EB1226401																		
QLD_Hist_202012-3	MW009	15/10/2012	EB1226844		<0.1																
QLD_Hist_202012-3	MW009	16/01/2013	EB1301014																		
QLD_Hist_202012-3	MW009	22/01/2013	EB1301359		<0.1																
QLD_Hist_202012-3	MW009	27/08/2013	EB1320742		**0.3**																
QLD_Hist_202012-3	MW009	22/02/2017	EB1703481	<0.05	0.16	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**3.7**		6.66			7.02	
QLD_Hist_202012-3	MW009	18/10/2017	EB1721647	<0.05	0.1	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.96**		5.27			5.64	
QLD_0861_PFAS	MW009	1/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.40**		3.90			4.13	
QLD_0861_PFAS	MW009	29/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.90**		4.64			4.94	
QLD_0861_PFAS	MW009	29/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.81**		4.54			4.83	
QLD_0861_PFAS	MW009	29/11/2019	232094	<0.01	0.03	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**2.7**					4.8	
QLD_Hist_202012-3	MW012	18/12/2008	CS0802587	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	18/12/2008	EB0817974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220058	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	17/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	17/10/2012	EB1227213	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	11/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	11/02/2013	EB1303337	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	28/08/2013	EB1320949	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW012	23/02/2017	EB1703601	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW012	10/10/2017	EB1720882	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW012	11/10/2017	EB1721001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW012	8/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW012	26/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW012	27/04/2020	EB2011562	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW012	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	**0.09**	<0.12	<0.12	**0.05**	<0.12	<0.05	-	<0.05	-	-	**0.14**	-
QLD_0861_PFASOMP	MW012	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW012	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW012	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW012	27/10/2021	RN1333717	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW012	6/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.17**	-	**0.17**	-	-	**0.17**	-
QLD_0861_PFASOMP	MW012	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW012	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW012	24/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW012	21/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP_23	MW012	27/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW012	28/10/2023	EB2333894-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW012	30/10/2023	EB2333894-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW012	15/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-

TABLE A2: Groundwater Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
				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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfuolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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				0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water															0.07						
PFAS NEMP 2020 Freshwater 95%																					
PFAS NEMP 2020 Freshwater 99%																					
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_Hist_202012-3	MW015	18/12/2008	EB0817974																		
QLD_Hist_202012-3	MW015	8/11/2011	EB1123988		<0.1																
QLD_Hist_202012-3	MW015	25/07/2012	EB1219635		<0.1																
QLD_Hist_202012-3	MW015	25/07/2012	EB1219644																		
QLD_Hist_202012-3	MW015	25/07/2012	EB1219646																		
QLD_Hist_202012-3	MW015	17/10/2012	EB1226401																		
QLD_Hist_202012-3	MW015	17/10/2012	EB1227213		<0.1																
QLD_Hist_202012-3	MW015	25/01/2013	EB1301615		<0.1																
QLD_Hist_202012-3	MW015	25/01/2013	EB1301014																		
QLD_Hist_202012-3	MW015	29/08/2013	EB1321088		<0.1																
QLD_Hist_202012-3	MW018	30/07/2012	EB1220053		<0.1																
QLD_Hist_202012-3	MW018	30/07/2012	EB1220054																		
QLD_Hist_202012-3	MW018	30/07/2012	EB1220055																		
QLD_Hist_202012-3	MW018	30/07/2012	EB1220055																		
QLD_Hist_202012-3	MW018	16/10/2012	EB1226401																		
QLD_Hist_202012-3	MW018	16/10/2012	EB1226948		<0.1																
QLD_Hist_202012-3	MW018	11/02/2013	EB1302672																		
QLD_Hist_202012-3	MW018	11/02/2013	EB1303337		<0.1																
QLD_Hist_202012-3	MW018	12/09/2013	EB1322354		<0.1	<0.5		<0.02	<0.5		<0.5	<0.05		<0.5							
QLD_Hist_202012-3	MW018	1/03/2017	EB1704014	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05		<0.05			<0.05	
QLD_Hist_202012-3	MW018	13/10/2017	EB1721221	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01		<0.01			<0.01	
QLD_Hist_202012-3	MW020	31/07/2012	EB1220058	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	31/07/2012	EB1220060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	31/07/2012	EB1220061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	17/10/2012	EB1226401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	17/10/2012	EB1227213	-	**0.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	6/02/2013	EB1302670	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	6/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	27/08/2013	EB1320742	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW020	23/02/2017	EB1703601	<0.05	**0.18**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.81**	-	**11.6**	-	-	**12.8**	-
QLD_Hist_202012-3	MW020	9/10/2017	EB1720776	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**3.89**	-	**6.31**	-	-	**6.93**	-
QLD_0861_PFAS	MW020	8/05/2019	EB1911948	<0.05	**0.14**	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**22.7**	-	**32.5**	-	-	**34.6**	-
QLD_0861_PFAS	MW020	8/05/2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_FSBGME	MW020	25/06/2019	662866	<0.01	**0.11**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**14.9**	-	**20.31**	-	-	**21.68**	-
QLD_0861_FSBGME	MW020	25/06/2019	662866	<0.01	**0.41**	**0.01**	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**51**	-	**72.22**	-	-	**76.49**	-
QLD_0861_FSBGME	MW020	25/06/2019	EB1917024	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**34.3**	-	**51.5**	-	-	**55.5**	-
QLD_0861_PFAS	MW020	25/11/2019	EB1932183	<0.05	**0.10**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**9.76**	-	**15.5**	-	-	**16.7**	-
QLD_0861_PFASOMP	MW020	27/04/2020	EB2011562	<0.07	**0.08**	<0.07	<0.07	<0.07	<0.18	<0.07	<0.18	<0.18	<0.07	<0.18	**20.5**	-	**27.6**	-	-	**29.7**	-
QLD_0861_PFASOMP	MW020	13/10/2020	EB2027172	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**6.82**	-	**9.54**	-	-	**10.2**	-
QLD_0861_PFASOMP	MW020	20/04/2021	EB2111121	<0.05	**0.34**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**40.9**	-	**51.5**	-	-	**55.4**	-
QLD_0861_PFASOMP	MW020	27/10/2021	EB2130850	<0.05	**0.15**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**12.8**	-	**18.0**	-	-	**19.3**	-
QLD_0861_PFASOMP	MW020	6/04/2022	EB2209951	<0.05	**0.71**	<0.10	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**85.9**	-	**98.8**	-	-	**102**	-
QLD_0861_PFASOMP	MW020	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**3.25**	-	**4.43**	-	-	**4.66**	-
QLD_0861_PFASOMP_23	MW020	21/04/2023	EB2312062-AA	<0.10	**0.88**	<0.10	<0.10	<0.10	<0.24	<0.10	<0.24	<0.24	<0.10	<0.24	**134**	-	**170**	-	-	**180**	-
QLD_0861_PFASOMP_23	MW020	27/10/2023	RN1410504	<0.01	**0.68**	**0.079**	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW020	28/10/2023	EB2333894-AA	<0.05	**0.78**	**0.07**	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**119**	-	**149**	-	-	**157**	-
QLD_0861_PFASOMP_23	MW020	30/10/2023	EB2333894-AA	<0.24	**0.76**	<0.24	<0.24	<0.24	<0.59	<0.24	<0.59	<0.59	<0.24	<0.59	**146**	-	**184**	-	-	**194**	-
QLD_0861_PFASOMP_24	MW020	15/04/2024	EB2413910	<0.24	**0.49**	<0.24	<0.24	<0.24	<0.59	<0.24	<0.59	<0.59	<0.24	<0.59	**106**	-	**125**	-	-	**132**	-
QLD_0861_PFAS	MW021	8/05/2019	EB1911948	<0.05	**0.07**	**0.05**	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**75.3**	-	**61.8**	-	-	**63.4**	-
QLD_0861_PFAS	MW021	19/11/2019	EB1931427	<0.05	**0.08**	**0.07**	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**70.1**	-	**76.0**	-	-	**78.2**	-
QLD_0861_PFASOMP	MW021	29/04/2020	EB2011562	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.16	<0.16	<0.06	<0.16	**57.8**	-	**63.6**	-	-	**65.7**	-
QLD_0861_PFASOMP	MW021	14/10/2020	EB2027172	<0.05	<0.05	**0.06**	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**53.9**	-	**59.9**	-	-	**61.8**	-
QLD_0861_PFASOMP	MW021	19/04/2021	EB2111121	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**81.3**	-	**89.1**	-	-	**93.4**	-
QLD_0861_PFASOMP	MW021	28/10/2021	EB2130850	<0.07	<0.07	<0.07	<0.07	<0.07	<0.17	<0.07	<0.17	<0.17	<0.07	<0.17	**95.6**	-	**105**	-	-	**109**	-
QLD_0861_PFASOMP	MW021	30/03/2022	EB2209950	<0.05	<0.25	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**59.9**	-	**68.5**	-	-	**71.9**	-
QLD_0861_PFASOMP	MW021	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**88.0**	-	**99.4**	-	-	**105**	-
QLD_0861_PFASOMP_23	MW021	28/04/2023	EB2312761-AA	<0.25	<0.25	<0.25	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.25	<0.62	**142**	-	**157**	-	-	**164**	-
QLD_0861_PFASOMP_23	MW021	28/04/2023	EB2312761-AA	<0.24	<0.24	<0.24	<0.24	<0.24	<0.61	<0.24	<0.61	<0.61	<0.24	<0.61	**139**	-	**154**	-	-	**161**	-
QLD_0861_PFASOMP_23	MW021	28/04/2023	RN1393133	<0.01	**0.052**	**0.053**	<0.01	**0.01**	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW021	27/10/2023	EB2333887-AA	<0.10	<0.10	<0.20	<0.10	<0.10	<0.24	<0.10	<0.24	<0.24	<0.10	<0.24	**191**	-	**205**	-	-	**211**	-
QLD_Hist_202012-3	MW022	24/01/2013	EB1301595	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW022	24/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW022	28/08/2013	EB1320949	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW022	2/03/2017	EB1704146	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**31.9**	-	**43.2**	-	-	**47.1**	-
QLD_Hist_202012-3	MW022	16/10/2017	EB1721395	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**14.1**	-	**19.8**	-	-	**22.2**	-
QLD_0861_PFAS	MW022	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**17.3**	-	**23.4**	-	-	**25.6**	-
QLD_0861_PFAS	MW022	19/11/2019	EB1931427	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**11.9**	-	**17.9**	-	-	**20.0**	-
QLD_0861_PFASOMP	MW022	21/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**9.31**	-	**14.6**	-	-	**16.6**	-
QLD_0861_PFASOMP	MW022	12/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**10.2**	-	**15.2**	-	-	**17.0**	-
QLD_0861_PFASOMP	MW022	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**18.1**	-	**22.1**	-	-	**24.4**	-
QLD_0861_PFASOMP	MW022	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**9.01**	-	**13.5**	-	-	**15.0**	-
QLD_0861_PFASOMP	MW022	30/03/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.24**	-	**5.96**	-	-	**6.62**	-
QLD_0861_PFASOMP	MW022	9/11/2022	EB2233631	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.54**	-	**2.05**	-	-	**2.26**	-
QLD_0861_PFASOMP	MW022	9/11/2022	EB2233631	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.64**	-	**2.12**	-	-	**2.34**	-
QLD_0861_PFASOMP	MW022	9/11/2022	RN1373013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW022	28/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.03	<0.06	<0.03	<0.06	<0.06	<0.03	<0.06	**8.95**	-	**12.5**	-	-	**13.9**	-
QLD_0861_PFASOMP_23	MW022	25/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**10.1**	-	**14.6**	-	-	**16.2**	-
QLD_0861_PFASOMP_24	MW022	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.47**	-	**6.32**	-	-	**7.15**	-
QLD_Hist_202012-3	MW023	11/02/2013	EB1302672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW023	11/02/2013	EB1303337	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW023	27/08/2013	EB1320742	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW023	21/02/2017	EB1703368	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.38**	-	**0.44**	-	-	**0.47**	-
QLD_Hist_202012-3	MW023	10/10/2017	EB1720882	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.19**	-	**0.22**	-	-	**0.24**	-
QLD_0861_PFAS	MW023	13/05/2019	EB1912390	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.23**	-	**0.26**	-	-	**0.28**	-

TABLE A2: Groundwater Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
				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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfuolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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				0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water															0.07						
PFAS NEMP 2020 Freshwater 95%																					
PFAS NEMP 2020 Freshwater 99%																					
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFASOMP	MW023	13/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	0.33	-	-	-	-	-	-
QLD_0861_PFAS	MW023	3/12/2019	EB1932627	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.33**	-	**0.35**	-	-	**0.37**	-
QLD_0861_PFASOMP	MW023	22/04/2020	EB2011246-AC	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.27**	-	**0.36**	-	-	**0.39**	-
QLD_0861_PFASOMP	MW023	21/10/2020	EB2027539	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.23**	-	**0.27**	-	-	**0.30**	-
QLD_0861_PFASOMP	MW023	21/10/2020	EB2027539	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.34**	-	**1.47**	-	-	**1.51**	-
QLD_0861_PFASOMP	MW023	21/10/2020	RN1292508	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW023	21/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.15**	-	**1.36**	-	-	**1.51**	-
QLD_0861_PFASOMP	MW023	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.52**	-	**0.59**	-	-	**0.66**	-
QLD_0861_PFASOMP	MW023	7/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.84**	-	**1.04**	-	-	**1.20**	-
QLD_0861_PFASOMP	MW023	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.50**	-	**0.59**	-	-	**0.65**	-
QLD_0861_PFASOMP_23	MW023	26/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.42**	-	**0.48**	-	-	**0.53**	-
QLD_0861_PFASOMP_23	MW023	26/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.42**	-	**0.48**	-	-	**0.53**	-
QLD_0861_PFASOMP_23	MW023	26/04/2023	RN1393133	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW023	29/11/2023	EB2337879-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.59**	-	**0.69**	-	-	**0.75**	-
QLD_0861_PFASOMP_24	MW023	18/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.90**	-	**1.08**	-	-	**1.28**	-
QLD_Hist_202012-3	MW024	24/01/2013	EB1301595	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW024	24/01/2013	EB1301595	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW024	24/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW024	24/01/2013	366696	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW024	28/08/2013	EB1320949	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW024	3/03/2017	EB1704238	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW024	13/10/2017	EB1721221	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW024	1/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW024	21/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW024	15/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW024	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW024	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW024	4/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW024	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP_23	MW024	28/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.16**	-	**0.16**	-	-	**0.16**	-
QLD_0861_PFASOMP_23	MW024	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP_24	MW024	16/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.10**	-	-	**0.12**	-
QLD_Hist_202012-3	MW025	24/01/2013	EB1301595	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW025	24/01/2013	EB1301014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW025	30/08/2013	EB1321090	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW025	22/02/2017	EB1703481	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.58**	-	**2.22**	-	-	**2.43**	-
QLD_Hist_202012-3	MW025	11/10/2017	EB1721001	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.59**	-	**2.18**	-	-	**2.4**	-
QLD_0861_PFAS	MW025	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW025	1/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.53**	-	**0.74**	-	-	**0.82**	-
QLD_0861_PFAS	MW025	19/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.73**	-	**0.92**	-	-	**0.99**	-
QLD_0861_PFASOMP	MW025	27/04/2020	EB2011562	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.77**	-	**1.02**	-	-	**1.12**	-
QLD_0861_PFASOMP	MW025	14/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.57**	-	**0.80**	-	-	**0.88**	-
QLD_0861_PFASOMP	MW025	14/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.53**	-	**0.76**	-	-	**0.83**	-
QLD_0861_PFASOMP	MW025	14/10/2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW025	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.95**	-	**1.31**	-	-	**1.45**	-
QLD_0861_PFASOMP	MW025	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.72**	-	**0.98**	-	-	**1.08**	-
QLD_0861_PFASOMP	MW025	6/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.63**	-	**2.81**	-	-	**3.06**	-
QLD_0861_PFASOMP	MW025	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.44**	-	**4.33**	-	-	**4.59**	-
QLD_0861_PFASOMP_23	MW025	20/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.37**	-	**4.28**	-	-	**4.60**	-
QLD_0861_PFASOMP_23	MW025	28/10/2023	EB2333894-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.36**	-	**4.06**	-	-	**4.31**	-
QLD_0861_PFASOMP_24	MW025	3/05/2024	EB2414902	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.46**	-	**3.93**	-	-	**4.19**	-
QLD_Hist_202012-3	MW026	30/08/2013	EB1321090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW026	30/08/2013	EB1323023	-	**0.1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW026	22/02/2017	EB1703481	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW026	9/10/2017	EB1720776	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW026	7/05/2019	EB1911948	<0.10	**0.20**	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	**0.20**	-	-	**0.20**	-
QLD_0861_PFAS	MW026	29/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW026	28/04/2020	EB2011562	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP	MW026	16/10/2020	EB2027176-AA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	<0.10	-	-	<0.10	-
QLD_0861_PFASOMP	MW026	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW026	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP	MW026	6/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP	MW026	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP_23	MW026	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW026	27/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW028	29/08/2013	EB1321088	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW028	1/03/2017	EB1704014	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**60.6**	-	**74**	-	-	**80.9**	-
QLD_Hist_202012-3	MW028	12/10/2017	EB1721110	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**47.5**	-	**60.8**	-	-	**67.1**	-
QLD_0861_PFAS	MW028	16/01/2018	EB1802042	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW028	7/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**30.7**	-	**36.9**	-	-	**40.0**	-
QLD_0861_PFAS	MW028	27/11/2019	EB1932183	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**54.2**	-	**67.0**	-	-	**72.7**	-
QLD_0861_PFAS	MW028	27/11/2019	EB1932183	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**57.5**	-	**70.5**	-	-	**76.6**	-
QLD_0861_PFAS	MW028	27/11/2019	232094	<0.01	**0.06**	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**83**	-	-	-	-	**100**	-
QLD_0861_PFASOMP	MW028	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**44.2**	-	**55**	-	-	**61.1**	-
QLD_0861_PFASOMP	MW028	15/10/2020	EB2027172	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**48.1**	-	**60.5**	-	-	**66.0**	-
QLD_0861_PFASOMP	MW028	16/04/2021	EB2111121	<0.08	<0.08	<0.08	<0.08	<0.08	<0.21	<0.08	<0.21	<0.21	<0.08	<0.21	**66.5**	-	**80.4**	-	-	**86.7**	-
QLD_0861_PFASOMP	MW028	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**60.1**	-	**74.0**	-	-	**80.5**	-
QLD_0861_PFASOMP	MW028	4/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.87**	-	**5.65**	-	-	**6.06**	-
QLD_0861_PFASOMP	MW028	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**16.3**	-	**19.4**	-	-	**20.9**	-
QLD_0861_PFASOMP_23	MW028	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**26.4**	-	**31.8**	-	-	**35.5**	-
QLD_0861_PFASOMP_23	MW028	25/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**21.7**	-	**26.7**	-	-	**29.5**	-
QLD_0861_PFASOMP_24	MW028	18/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**52.6**	-	**63.3**	-	-	**68.1**	-
QLD_Hist_202012-3	MW029	29/08/2013	EB1321088	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW029	1/03/2017	EB1704014	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.29**	-	**5.07**	-	-	**5.49**	-
QLD_Hist_202012-3	MW029	12/10/2017	EB1721110	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**6.1**	-	**7.35**	-	-	**7.94**	-

TABLE A2: Groundwater Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
				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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfuolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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				0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water															0.07						
PFAS NEMP 2020 Freshwater 95%																					
PFAS NEMP 2020 Freshwater 99%																					
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFAS	MW029	7/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**5.79**	-	**6.90**	-	-	**7.45**	-
QLD_0861_PFAS	MW029	27/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.24**	-	**8.49**	-	-	**9.17**	-
QLD_0861_PFASOMP	MW029	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.05**	-	**8.62**	-	-	**9.54**	-
QLD_0861_PFASOMP	MW029	15/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**8.91**	-	**11.2**	-	-	**12.2**	-
QLD_0861_PFASOMP	MW029	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**8.27**	-	**10.1**	-	-	**11.1**	-
QLD_0861_PFASOMP	MW029	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**9.92**	-	**12.2**	-	-	**13.4**	-
QLD_0861_PFASOMP	MW029	4/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**11.2**	-	**13.6**	-	-	**15.1**	-
QLD_0861_PFASOMP	MW029	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**11.8**	-	**14.4**	-	-	**16.0**	-
QLD_0861_PFASOMP_23	MW029	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**9.56**	-	**12.0**	-	-	**13.3**	-
QLD_0861_PFASOMP_23	MW029	25/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.51**	-	**9.46**	-	-	**10.5**	-
QLD_0861_PFASOMP_24	MW029	18/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**9.06**	-	**11.2**	-	-	**12.3**	-
QLD_0861_PFASOMP_24	MW029	18/04/2024	EB2413950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.76**	-	**9.85**	-	-	**10.9**	-
QLD_0861_PFASOMP_24	MW029	18/04/2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_Hist_202012-3	MW030	27/02/2017	EB1703780	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.32**	-	**0.69**	-	-	**0.8**	-
QLD_Hist_202012-3	MW030	18/10/2017	EB1721647	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.64**	-	**4.29**	-	-	**5.13**	-
QLD_0861_PFAS	MW030	10/05/2019	EB1911948	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**2.59**	-	**7.28**	-	-	**8.11**	-
QLD_0861_PFAS	MW030	20/11/2019	EB1931427	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**2.75**	-	**6.91**	-	-	**7.76**	-
QLD_0861_PFASOMP	MW030	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.72**	-	**7.93**	-	-	**8.98**	-
QLD_0861_PFASOMP	MW030	13/10/2020	EB2027172	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**2.91**	-	**8.45**	-	-	**9.48**	-
QLD_0861_PFASOMP	MW030	13/04/2021	EB2111121	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.96**	-	**9.11**	-	-	**10.3**	-
QLD_0861_PFASOMP	MW030	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**3.41**	-	**11.6**	-	-	**12.9**	-
QLD_0861_PFASOMP	MW030	1/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**5.43**	-	**18.0**	-	-	**20.2**	-
QLD_0861_PFASOMP	MW030	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**11.6**	-	**36.8**	-	-	**41.5**	-
QLD_0861_PFASOMP_23	MW030	22/05/2023	EB2315514	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**12.9**	-	**33.7**	-	-	**38.5**	-
QLD_0861_PFASOMP_23	MW030	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**11.7**	-	**28.4**	-	-	**32.5**	-
QLD_0861_PFASOMP_24	MW030	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**13.7**	-	**35.3**	-	-	**39.9**	-
QLD_Hist_202012-3	MW031	29/08/2013	EB1321088	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW031	29/08/2013	EB1321088	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW031	27/02/2017	EB1703780	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW031	27/02/2017	EB1703780	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW031	27/02/2017	535909	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW031	18/10/2017	EB1721647	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFAS	MW031	10/05/2019	EB1911948	<0.05	**0.15**	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	**0.15**	-	-	**0.15**	-
QLD_0861_PFAS	MW031	10/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW031	10/05/2019	217521	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**0.02**	-	-	-	-	**0.02**	-
QLD_0861_PFAS	MW031	20/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFASOMP	MW031	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW031	22/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW031	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFASOMP	MW031	13/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW031	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW031	1/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW031	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP_23	MW031	26/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW031	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW031	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW031	23/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	MW031	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW032	30/08/2013	EB1321090	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW032	24/02/2017	EB1703684	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**28.9**	-	**35.3**	-	-	**37.4**	-
QLD_Hist_202012-3	MW032	17/10/2017	EB1721554	<0.05	**0.11**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**30.8**	-	**41**	-	-	**43.7**	-
QLD_0861_PFAS	MW032	2/05/2019	EB1911342	<0.05	**0.07**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**25.1**	-	**33.5**	-	-	**35.6**	-
QLD_0861_PFAS	MW032	19/11/2019	EB1931427	<0.05	**0.11**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**24.8**	-	**34.4**	-	-	**36.7**	-
QLD_0861_PFASOMP	MW032	27/04/2020	EB2011562	<0.07	<0.07	<0.07	<0.07	<0.07	<0.17	<0.07	<0.17	<0.17	<0.07	<0.17	**29.8**	-	**38.4**	-	-	**40.8**	-
QLD_0861_PFASOMP	MW032	12/10/2020	EB2027172	<0.05	**0.10**	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**27.6**	-	**37.7**	-	-	**40.1**	-
QLD_0861_PFASOMP	MW032	21/04/2021	EB2111121	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**31.8**	-	**42.0**	-	-	**44.9**	-
QLD_0861_PFASOMP	MW032	21/04/2021	EB2111121	<0.05	**0.09**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**31.3**	-	**41.3**	-	-	**44.2**	-
QLD_0861_PFASOMP	MW032	21/04/2021	RN1313031	<0.01	**0.062**	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW032	25/10/2021	EB2130850	<0.10	**0.13**	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**33.2**	-	**43.4**	-	-	**45.8**	-
QLD_0861_PFASOMP	MW032	25/10/2021	EB2130850	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**32.8**	-	**42.8**	-	-	**45.2**	-
QLD_0861_PFASOMP	MW032	25/10/2021	RN1333717	<0.01	**0.11**	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW032	6/04/2022	EB2209951	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**34.8**	-	**46.7**	-	-	**49.7**	-
QLD_0861_PFASOMP	MW032	24/10/2022	EB2231825	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**37.4**	-	**47.9**	-	-	**51.4**	-
QLD_0861_PFASOMP_23	MW032	27/04/2023	EB2312761-AA	<0.05	<0.11	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**27.8**	-	**36.8**	-	-	**39.3**	-
QLD_0861_PFASOMP_23	MW032	27/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**29.9**	-	**39.2**	-	-	**41.7**	-
QLD_0861_PFASOMP_24	MW032	15/04/2024	EB2413910	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**35.3**	-	**45.5**	-	-	**48.4**	-
QLD_Hist_202012-3	MW033	22/02/2017	EB1703481	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW033	27/03/2017	539718	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-
QLD_Hist_202012-3	MW033	10/10/2017	EB1720882	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW033	8/02/2018	EB1803867	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW033	14/05/2019	EB1912390	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFAS	MW033	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	MW033	28/04/2020	EB2011562	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW033	19/10/2020	EB2027539	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW033	19/10/2020	EB2027539	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW033	19/10/2020	RN1292508	<0.01	**0.023**	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW033	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW033	27/10/2021	EB2130850	<0.05	**0.11**	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	**0.11**	-	-	**0.11**	-
QLD_0861_PFASOMP	MW033	6/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW033	6/04/2022	EB2209942	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW033	6/04/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW033	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP_23	MW033	22/05/2023	EB2315514	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP_23	MW033	27/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP_24	MW033	17/04/2024	EB2413910	<0.05	**0.19**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.19**	-	-	**0.19**	-

TABLE A2: Groundwater Analytical Summary

	PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorotadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water												0.07						
PFAS NEMP 2020 Freshwater 95%																		
PFAS NEMP 2020 Freshwater 99%																		

Project ID	Location Code	Date	Lab Report Number																
QLD_0861_PFASOMP_24	MW033	17/04/2024	EB2413950	<0.05	**0.17**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.17**	-	-	**0.17**	-
QLD_0861_PFASOMP_24	MW033	17/04/2024	RN1427801	<0.01	**0.1**	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_Hist_202012-3	MW034	1/03/2017	EB1704014	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW034	10/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFAS	MW034	20/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW034	20/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW034	21/11/2019	232494	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	-	-	-	-	<0.01	-
QLD_0861_PFAS	MW034	21/11/2019	231783	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**0.01**	-	-	-	-	**0.01**	-
QLD_0861_PFAS	MW034	2/12/2019	EB1932627	<0.001	**0.002**	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001	**0.0038**	-	**0.0058**	-	-	**0.0058**	-
QLD_0861_PFASOMP	MW034	23/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.21**	-	**0.21**	-	-	**0.21**	-
QLD_0861_PFASOMP	MW034	23/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW034	13/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW034	13/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW034	13/10/2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW034	19/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.59**	-	**0.59**	-	-	**0.59**	-
QLD_0861_PFASOMP	MW034	19/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW034	19/04/2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW034	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW034	1/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW034	9/11/2022	EB2233631	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW034	22/05/2023	EB2315514	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP_23	MW034	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW034	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW035	1/03/2017	EB1704014	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW035	13/10/2017	EB1721221	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW035	1/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW035	21/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW035	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW035	14/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW035	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW035	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW035	4/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW035	9/11/2022	EB2233631	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW035	9/05/2023	EB2314270	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW035	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW035	16/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_Hist_202012-3	MW036	28/02/2017	EB1703884	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_Hist_202012-3	MW036	12/10/2017	EB1721110	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFAS	MW036	7/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.05**	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFAS	MW036	27/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP	MW036	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW036	15/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP	MW036	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW036	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP	MW036	4/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW036	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW036	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW036	25/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW036	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_23	MW036	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP_23	MW036	23/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW036	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_24	MW036	18/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_Hist_202012-3	MW037	24/02/2017	EB1703684	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**3.72**	-	**7.47**	-	-	**9.05**	-
QLD_Hist_202012-3	MW037	11/10/2017	EB1721001	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.6**	-	**13**	-	-	**15.7**	-
QLD_Hist_202012-3	MW037	11/10/2017	EB1721001	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**6.98**	-	**12**	-	-	**14.6**	-
QLD_Hist_202012-3	MW037	11/10/2017	EB1721001	<0.05	**0.25**	<0.05	<0.05	**0.28**	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**66.7**	-	**75.3**	-	-	**78.9**	-
QLD_0861_PFAS	MW037	8/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**6.54**	-	**11.5**	-	-	**13.6**	-
QLD_0861_PFAS	MW037	19/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**5.82**	-	**10.2**	-	-	**12.2**	-
QLD_0861_PFASOMP	MW037	22/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.04	<0.09	<0.04	<0.09	<0.09	<0.04	<0.09	**4.6**	-	**8.13**	-	-	**9.84**	-
QLD_0861_PFASOMP	MW037	22/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW037	12/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.28**	-	**7.73**	-	-	**9.15**	-
QLD_0861_PFASOMP	MW037	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**3.63**	-	**6.24**	-	-	**7.70**	-
QLD_0861_PFASOMP	MW037	27/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**3.80**	-	**6.61**	-	-	**7.85**	-
QLD_0861_PFASOMP	MW037	30/03/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.26**	-	**5.44**	-	-	**5.91**	-
QLD_0861_PFASOMP	MW037	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.32**	-	**7.30**	-	-	**8.56**	-
QLD_0861_PFASOMP_23	MW037	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**6.82**	-	**11.9**	-	-	**14.5**	-
QLD_0861_Stage2_23	MW037	10/08/2023	1018693	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**5.58**	-	**9.22**	-	-	**11.5**	-
QLD_0861_PFASOMP_23	MW037	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**5.94**	-	**10.8**	-	-	**13.0**	-
QLD_0861_PFASOMP_23	MW037	23/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**6.90**	-	**12.3**	-	-	**14.7**	-
QLD_0861_PFASOMP_23	MW037	23/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	MW037	15/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**8.98**	-	**14.3**	-	-	**16.7**	-
QLD_0861_PFASOMP_24	MW037	15/04/2024	EB2413950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**8.91**	-	**14.5**	-	-	**17.1**	-
QLD_0861_PFASOMP_24	MW037	15/04/2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFAS	MW039	15/01/2018	EB1802042	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.46**		**1.17**			**1.33**	
QLD_0861_PFAS	MW039	15/01/2018	EB1802042	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.33**		**1.13**			**1.34**	
QLD_0861_PFAS	MW039	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.60**		**1.97**			**2.33**	
QLD_0861_PFAS	MW039		184089	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5							
QLD_0861_PFAS	MW041	21/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	**0.37**	-	-	**0.42**	-
QLD_0861_PFAS	MW041	8/05/2019	EB1911948	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	**0.14**	-	-	**0.14**	-
QLD_0861_PFAS	MW041	2/12/2019	EB1932627	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.23**	-	-	**0.23**	-
QLD_0861_PFASOMP	MW041	23/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.11**	-	-	**0.11**	-
QLD_0861_PFASOMP	MW041	14/10/2020	EB2027172	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	<0.10	-	-	<0.10	-
QLD_0861_PFASOMP	MW041	22/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.19**	-	-	**0.19**	-
QLD_0861_PFASOMP	MW041	5/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.44**	-	**1.33**	-	-	**1.38**	-

TABLE A2: Groundwater Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
				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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorotadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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				0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water															0.07						
PFAS NEMP 2020 Freshwater 95%																					
PFAS NEMP 2020 Freshwater 99%																					
Project ID	**Location Code**	**Date**	**Lab Report Number**																		
QLD_0861_PFASOMP	MW041	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.12**	-	**0.59**	-	-	**0.74**	-
QLD_0861_PFASOMP_23	MW041	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW041	30/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.26**	-	**2.30**	-	-	**2.43**	-
QLD_0861_PFASOMP_24	MW041	3/05/2024	EB2414902	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.49**	-	**1.53**	-	-	**1.81**	-
QLD_0861_PFAS	MW042	6/02/2018	EB1803636	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW042	3/05/2019	EB1911342	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	<0.10	-	-	<0.10	-
QLD_0861_PFAS	MW042	26/11/2019	EB1932183	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	MW042	28/04/2020	EB2011562	<0.05	**0.07**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFASOMP	MW042	16/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFASOMP	MW042	15/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW042	15/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW042	15/04/2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW042	26/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW042	26/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW042	26/10/2021	RN1333717	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW042	5/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW042	26/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP_23	MW042	27/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP_23	MW042	30/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_24	MW042	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.21**	-	**0.23**	-	-	**0.23**	-
QLD_0861_PFAS	MW043	22/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW043	22/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFAS	MW043	3/05/2019	EB1911342	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	<0.10	-	-	<0.10	-
QLD_0861_PFAS	MW043	26/11/2019	EB1932183	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.15**	-	**0.21**	-	-	**0.21**	-
QLD_0861_PFASOMP	MW043	28/04/2020	EB2011562	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW043	16/10/2020	EB2027176-AA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	<0.10	-	-	<0.10	-
QLD_0861_PFASOMP	MW043	15/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW043	26/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.49**	-	**1.26**	-	-	**1.34**	-
QLD_0861_PFASOMP	MW043	5/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.39**	-	**0.89**	-	-	**0.98**	-
QLD_0861_PFASOMP	MW043	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.10**	-	**0.14**	-	-	**0.14**	-
QLD_0861_PFASOMP	MW043	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.14**	-	**0.20**	-	-	**0.20**	-
QLD_0861_PFASOMP	MW043	25/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW043	5/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.39**	-	**0.89**	-	-	**0.98**	-
QLD_0861_PFASOMP	MW043	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.10**	-	**0.14**	-	-	**0.14**	-
QLD_0861_PFASOMP	MW043	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.14**	-	**0.20**	-	-	**0.20**	-
QLD_0861_PFASOMP	MW043	25/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW043	27/04/2023	EB2312761-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.70**	-	**1.07**	-	-	**1.14**	-
QLD_0861_PFASOMP_23	MW043	30/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.10**	-	**0.15**	-	-	**0.15**	-
QLD_0861_PFASOMP_24	MW043	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.46**	-	**0.76**	-	-	**0.82**	-
QLD_0861_PFAS	MW043		186049	<0.05	<0.05	<0.05	<0.05	<0.5	<0.2	<0.1	<0.2	<0.5	<0.1	<2	-	-	-	-	-	-	-
QLD_0861_PFAS	MW044	6/02/2018	EB1803636	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW044	7/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW044	27/11/2019	EB1932183	<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**	-	-	**0.05**	-
QLD_0861_PFASOMP	MW044	22/04/2020	EB2011246-AC	<0.05	**0.13**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.14**	-	-	**0.14**	-
QLD_0861_PFASOMP	MW044	15/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW044	21/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW044	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW044	1/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW044	1/04/2022	EB2209942	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW044	1/04/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW044	26/10/2022	EB2231825	<0.25	<0.25	<0.25	<0.25	<0.25	<0.63	<0.25	<0.63	<0.63	<0.25	<0.63	<0.25	-	<0.25	-	-	<0.25	-
QLD_0861_PFASOMP	MW044	26/10/2022	EB2231825	<0.25	<0.25	<0.25	<0.25	<0.25	<0.63	<0.25	<0.63	<0.63	<0.25	<0.63	<0.25	-	<0.25	-	-	<0.25	-
QLD_0861_PFASOMP	MW044	26/10/2022	RN1371573	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW044	11/05/2023	EB2314270	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP_23	MW044	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW044	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP_24	MW044	18/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW046	7/02/2018	EB1803867	<0.10	**15.8**	**1.59**	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**298**	-	**432**	-	-	**456**	-
QLD_0861_PFAS	MW046	7/02/2018	ES1806917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW046	6/05/2019	EB1911948	<0.20	**38.8**	**3.00**	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.50	**417**	-	**635**	-	-	**663**	-
QLD_0861_FSBGME	MW046	25/06/2019	662866	**0.09**	**37**	**3.7**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**520**	-	**746.7**	-	-	**784.48**	-
QLD_0861_PFAS	MW046	18/11/2019	EB1931427	**0.11**	**7.83**	**2.31**	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**330**	-	**522**	-	-	**551**	-
QLD_0861_PFASOMP	MW046	27/04/2020	EB2011562	<1.62	**41.2**	**2.92**	<1.62	<1.62	<4.05	<1.62	<4.05	<4.05	<1.62	<4.05	**373**	-	**571**	-	-	**597**	-
QLD_0861_PFASOMP	MW046	19/10/2020	EB2027539	<0.44	**43.8**	**1.74**	<0.44	<0.44	<1.11	<0.44	<1.11	<1.11	<0.44	<1.11	**365**	-	**621**	-	-	**654**	-
QLD_0861_PFASOMP	MW046	19/10/2020	EB2027539	<0.18	**41.2**	**2.08**	<0.18	<0.18	<0.45	<0.18	<0.45	<0.45	<0.18	<0.45	**381**	-	**622**	-	-	**655**	-
QLD_0861_PFASOMP	MW046	19/10/2020	RN1292508	**0.1**	**36**	**1.7**	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW046	20/04/2021	EB2111121	**0.09**	**38.5**	**2.98**	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**420**	-	**663**	-	-	**707**	-
QLD_0861_PFASOMP	MW046	26/10/2021	EB2130850	<0.50	**33.6**	**1.75**	<0.50	<0.50	<1.25	<0.50	<1.25	<1.25	<0.50	<1.25	**277**	-	**444**	-	-	**462**	-
QLD_0861_PFASOMP	MW046	30/03/2022	EB2209950	<0.25	**34.5**	**1.60**	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.25	<0.62	**264**	-	**430**	-	-	**450**	-
QLD_0861_PFASOMP	MW046	25/10/2022	EB2231825	<0.25	**34.6**	**1.74**	<0.25	<0.25	<0.63	<0.25	<0.63	<0.63	<0.25	<0.63	**335**	-	**557**	-	-	**587**	-
QLD_0861_PFASOMP_23	MW046	17/04/2023	EB2312062-AA	<0.25	**13.9**	**0.80**	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.25	<0.62	**121**	-	**187**	-	-	**196**	-
QLD_0861_PFASOMP_23	MW046	31/10/2023	EB2333887-AA	<0.25	**24.1**	**2.55**	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.25	<0.62	**247**	-	**358**	-	-	**373**	-
QLD_0861_PFASOMP_24	MW046	15/04/2024	EB2413910	<0.05	**3.43**	<0.20	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**36.3**	-	**58.1**	-	-	**60.6**	-
QLD_0861_PFAS	MW047	15/01/2018	EB1802042	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.51**	-	**0.54**	-	-	**0.54**	-
QLD_0861_PFAS	MW047	6/04/2018	EB1808673	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.30**	-	**0.30**	-	-	**0.30**	-
QLD_0861_PFAS	MW047	6/04/2018	EB1810410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW047	2/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFAS	MW047	21/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW047	23/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.04	<0.1	<0.04	<0.1	<0.1	<0.04	<0.1	**13.5**	-	**15.9**	-	-	**17.2**	-
QLD_0861_PFASOMP	MW047	23/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.03	<0.08	<0.03	<0.08	<0.08	<0.03	<0.08	**13.2**	-	**15.6**	-	-	**16.8**	-
QLD_0861_PFASOMP	MW047	23/04/2020	RN1274652	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW047	12/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.53**	-	**1.77**	-	-	**1.87**	-
QLD_0861_PFASOMP	MW047	12/10/2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.71**	-	**1.99**	-	-	**2.12**	-
QLD_0861_PFASOMP	MW047	12/10/2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW047	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.64**	-	**3.53**	-	-	**3.80**	-
QLD_0861_PFASOMP	MW047	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.64**	-	**0.78**	-	-	**0.82**	-
QLD_0861_PFASOMP	MW047	20/04/2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW047	26/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**8.79**	-	**13.6**	-	-	**14.5**	-
QLD_0861_PFASOMP	MW047	30/03/2022	EB2209950	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**6.85**	-	**9.77**	-	-	**10.6**	-

TABLE A2: Groundwater Analytical Summary

	PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorotetradecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water												0.07						
PFAS NEMP 2020 Freshwater 95%																		
PFAS NEMP 2020 Freshwater 99%																		

Project ID	Location Code	Date	Lab Report Number																
QLD_0861_PFASOMP	MW047	30/03/2022	EB2209942	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**71.1**	-	**79.7**	-	-	**84.3**	-
QLD_0861_PFASOMP	MW047	30/03/2022	RN1349008	<0.01	**0.032**	**0.015**	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW047	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**16.7**	-	**22.6**	-	-	**24.5**	-
QLD_0861_PFASOMP_23	MW047	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**10.8**	-	**14.7**	-	-	**16.4**	-
QLD_0861_PFASOMP_23	MW047	26/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.10**	-	**1.13**	-	-	**1.21**	-
QLD_0861_PFASOMP_23	MW047	26/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.35**	-	**1.41**	-	-	**1.50**	-
QLD_0861_PFASOMP_23	MW047	26/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	MW047	15/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**15.5**	-	**19.2**	-	-	**20.4**	-
QLD_0861_PFAS	MW048	5/02/2018	EB1803636	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**26.3**	-	**32.2**	-	-	**34.1**	-
QLD_0861_PFAS	MW048	5/02/2018	ES1806917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW048	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**17.6**	-	**21.2**	-	-	**22.7**	-
QLD_0861_PFAS	MW048	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**18.2**	-	**21.9**	-	-	**23.3**	-
QLD_0861_PFAS	MW048	30/04/2019	217104	<0.01	**0.05**	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**20**	-	-	-	-	**26**	-
QLD_0861_PFAS	MW048	18/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**17.5**	-	**20.8**	-	-	**22.0**	-
QLD_0861_PFASOMP	MW048	24/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.04	<0.1	<0.04	<0.1	<0.1	<0.04	<0.1	**16.4**	-	**19.5**	-	-	**20.9**	-
QLD_0861_PFASOMP	MW048	12/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**14.7**	-	**17.9**	-	-	**19.0**	-
QLD_0861_PFASOMP	MW048	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**7.99**	-	**9.58**	-	-	**10.2**	-
QLD_0861_PFASOMP	MW048	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.34**	-	**2.70**	-	-	**2.82**	-
QLD_0861_PFASOMP	MW048	29/03/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**5.15**	-	**6.27**	-	-	**6.73**	-
QLD_0861_PFASOMP	MW048	25/10/2022	EB2231825	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	**20.9**	-	**23.7**	-	-	**25.1**	-
QLD_0861_PFASOMP_23	MW048	17/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**8.63**	-	**9.81**	-	-	**10.4**	-
QLD_0861_PFASOMP_23	MW048	26/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**9.05**	-	**10.4**	-	-	**11.1**	-
QLD_0861_PFASOMP_23	MW048	26/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**10.0**	-	**11.4**	-	-	**12.1**	-
QLD_0861_PFASOMP_23	MW048	26/10/2023	RN1410504	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	MW048	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.63**	-	**2.97**	-	-	**3.15**	-
QLD_0861_PFAS	MW049	5/02/2018	EB1803636	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**46.7**	-	**62.6**	-	-	**66.3**	-
QLD_0861_PFAS	MW049	5/02/2018	ES1806917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW049	5/02/2018	EB1803636	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**40.1**	-	**56.6**	-	-	**60.0**	-
QLD_0861_PFAS	MW049	5/02/2018	EB1803636	<0.05	**0.06**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**44.5**	-	**60.6**	-	-	**64.1**	-
QLD_0861_PFAS	MW049	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**43.5**	-	**56.0**	-	-	**59.1**	-
QLD_0861_PFAS	MW049	18/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**32.2**	-	**42.4**	-	-	**45.0**	-
QLD_0861_PFAS	MW049	18/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**32.2**	-	**42.3**	-	-	**44.8**	-
QLD_0861_PFAS	MW049	19/11/2019	231783	<0.01	**0.03**	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**31**	-	-	-	-	**43**	-
QLD_0861_PFASOMP	MW049	24/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.03	<0.08	<0.03	<0.08	<0.08	<0.03	<0.08	**23.5**	-	**28.9**	-	-	**30.7**	-
QLD_0861_PFASOMP	MW049	12/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**20.1**	-	**28.2**	-	-	**30.1**	-
QLD_0861_PFASOMP	MW049	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**25.9**	-	**34.5**	-	-	**36.8**	-
QLD_0861_PFASOMP	MW049	7/04/2022	EB2209951	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.83**	-	**6.44**	-	-	**6.88**	-
QLD_0861_PFASOMP	MW049	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**15.9**	-	**21.8**	-	-	**23.2**	-
QLD_0861_PFAS	MW050	5/02/2018	EB1803636	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW050	30/04/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW050	25/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW050	24/04/2020	EB2011246-AC	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW050	24/04/2020	RN1274652	<0.01	**0.015**	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW050	12/10/2020	EB2027208-AB	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW050	21/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.30**	-	**0.33**	-	-	**0.33**	-
QLD_0861_PFASOMP	MW050	28/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.18**	-	**0.24**	-	-	**0.24**	-
QLD_0861_PFASOMP	MW050	30/03/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP	MW050	24/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**0.17**	-	**0.17**	-	-	**0.17**	-
QLD_0861_PFASOMP_23	MW050	17/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.35**	-	**0.39**	-	-	**0.41**	-
QLD_0861_PFASOMP_23	MW050	17/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.34**	-	**0.40**	-	-	**0.42**	-
QLD_0861_PFASOMP_23	MW050	17/04/2023	RN1393124	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW050	28/10/2023	EB2333894-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.32**	-	**0.36**	-	-	**0.36**	-
QLD_0861_PFASOMP_24	MW050	19/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.22**	-	**0.25**	-	-	**0.25**	-
QLD_0861_PFAS	MW054D	21/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFAS	MW054D	5/04/2018	EB1808672	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW054D	9/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW054D	9/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW054D	9/05/2019	217521	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	-	-	-	-	<0.01	-
QLD_0861_PFAS	MW054D	28/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW054D	24/04/2020	EB2011246-AD	<0.05	**0.50**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.50**	-	-	**0.50**	-
QLD_0861_PFASOMP	MW054D	23/10/2020	EB2027834	<0.05	**0.14**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.14**	-	-	**0.14**	-
QLD_0861_PFASOMP	MW054D	21/04/2021	EB2111111	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW054D	28/10/2021	EB2130821	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW054D	5/04/2022	EB2209940	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP	MW054D	9/11/2022	EB2233627	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP_23	MW054D	26/04/2023	EB2312770	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW054D	26/10/2023	EB2333895	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP_24	MW054D	16/04/2024	EB2413937	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW054S	21/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFAS	MW054S	5/04/2018	EB1808672	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFAS	MW054S	9/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFAS	MW054S	28/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW054S	24/04/2020	EB2011246-AD	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	<0.10	-	-	<0.10	-
QLD_0861_PFASOMP	MW054S	24/04/2020	EB2011246-AD	<0.10	**0.10**	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	<0.10	-	**0.10**	-	-	**0.10**	-
QLD_0861_PFASOMP	MW054S	24/04/2020	RN1274651	<0.01	**0.091**	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	MW054S	21/04/2021	EB2111111	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.10**	-	**0.10**	-	-	**0.10**	-
QLD_0861_PFASOMP	MW054S	28/10/2021	EB2130821	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	MW054S	5/04/2022	EB2209940	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.24**	-	**0.28**	-	-	**0.28**	-
QLD_0861_PFASOMP	MW054S	9/11/2022	EB2233627	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.38**	-	**0.44**	-	-	**0.47**	-
QLD_0861_PFASOMP_23	MW054S	26/04/2023	EB2312770	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.35**	-	**0.36**	-	-	**0.38**	-
QLD_0861_PFASOMP_23	MW054S	26/10/2023	EB2333895	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.27**	-	**0.30**	-	-	**0.30**	-
QLD_0861_PFASOMP_24	MW054S	16/04/2024	EB2413937	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.22**	-	**0.22**	-	-	**0.22**	-
QLD_0861_PFAS	MW055D	9/03/2018	EB1806399	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW055D	6/04/2018	EB1808673	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW055D	2/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	-	<0.02	-	-	<0.02	-

TABLE A2: Groundwater Analytical Summary

	PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfuolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water												0.07						
PFAS NEMP 2020 Freshwater 95%																		
PFAS NEMP 2020 Freshwater 99%																		

Project ID	Location Code	Date	Lab Report Number																
QLD_0861_PFAS	MW055D	21/11/2019	EB1931427	<0.05	**0.86**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.87**	-	-	**0.87**	-
QLD_0861_PFASOMP	MW055D	22/04/2020	EB2011246-AC	<0.05	**0.52**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.52**	-	-	**0.52**	-
QLD_0861_PFASOMP	MW055D	14/10/2020	EB2027172	<0.05	**0.41**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	-	**0.41**	-	-	**0.41**	-
QLD_0861_PFASOMP	MW055D	16/04/2021	EB2111121	<0.05	**0.19**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.19**	-	-	**0.19**	-
QLD_0861_PFASOMP	MW055D	21/10/2021	EB2130835	<0.05	**0.05**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFASOMP	MW055D	1/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	MW055D	20/10/2022	EB2231197	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW055D	11/05/2023	EB2314270	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW055D	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW055D	16/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFAS	MW055S	9/03/2018	EB1806399	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.24**	-	**1.46**	-	-	**1.64**	-
QLD_0861_PFAS	MW055S	9/03/2018	ES1808754	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.18**	-	**1.34**	-	-	**1.54**	-
QLD_0861_PFAS	MW055S	6/04/2018	EB1810410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW055S	6/04/2018	EB1808673	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.85**	-	**0.94**	-	-	**1.05**	-
QLD_0861_PFAS	MW055S	2/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.27**	-	**1.43**	-	-	**1.58**	-
QLD_0861_PFAS	MW055S	2/05/2019	EB1911342	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.27**	-	**1.44**	-	-	**1.59**	-
QLD_0861_PFAS	MW055S	21/11/2019	EB1931427	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.43**	-	**1.67**	-	-	**1.86**	-
QLD_0861_PFASOMP	MW055S	22/04/2020	EB2011246-AC	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.38**	-	**1.69**	-	-	**1.87**	-
QLD_0861_PFASOMP	MW055S	14/10/2020	EB2027172	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.98**	-	**2.36**	-	-	**2.58**	-
QLD_0861_PFASOMP	MW055S	16/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.81**	-	**0.81**	-	-	**0.91**	-
QLD_0861_PFASOMP	MW055S	21/10/2021	EB2130835	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.48**	-	**0.60**	-	-	**0.65**	-
QLD_0861_PFASOMP	MW055S	1/04/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.72**	-	**0.87**	-	-	**0.96**	-
QLD_0861_PFASOMP	MW055S	20/10/2022	EB2231197	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.14**	-	**0.17**	-	-	**0.17**	-
QLD_0861_PFASOMP_23	MW055S	11/05/2023	EB2314270	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.48**	-	**0.61**	-	-	**0.66**	-
QLD_0861_PFASOMP_23	MW055S	24/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.40**	-	**2.89**	-	-	**3.22**	-
QLD_0861_PFASOMP_24	MW055S	16/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**2.72**	-	**3.26**	-	-	**3.60**	-
QLD_0861_PFAS	MW056I	21/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFAS	MW056I	5/04/2018	EB1808674	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW056I	9/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW056I	28/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW056I	22/04/2020	EB2011255	<0.05	**0.07**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFASOMP	MW056I	15/10/2020	EB2027208-AA	<0.05	**0.07**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	MW056I	15/04/2021	EB2111112	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW056I	22/10/2021	EB2130815	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW056I	29/03/2022	EB2209946	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_23	MW056I	18/04/2023	EB2312057	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP_23	MW056I	30/10/2023	EB2333894-AB	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_24	MW056I	16/04/2024	EB2413946	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFAS	MW056S	21/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW056S	5/04/2018	EB1808674	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW056S	9/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFAS	MW056S	28/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW056S	22/04/2020	EB2011255	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	MW056S	15/10/2020	EB2027208-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP	MW056S	15/04/2021	EB2111112	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW056S	22/10/2021	EB2130815	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW056S	29/03/2022	EB2209946	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW056S	29/03/2022	EB2209942	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW056S	29/03/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	**0.039**	<0.05	<0.02	**0.044**	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW056S	26/10/2023	EB2333898	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP_24	MW056S	16/04/2024	EB2413946	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP_24	MW056S	16/04/2024	EB2413950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP_24	MW056S	16/04/2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.01	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFAS	MW057I	22/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW057I	6/04/2018	EB1808674	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW057I	6/04/2018	EB1808675	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW057I	6/04/2018	189173	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057I	14/05/2019	EB1912390	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFAS	MW057I	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057I	14/05/2019	EB1912390	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFAS	MW057I	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057I	28/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW057I	28/04/2020	EB2011568	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW057I	15/10/2020	EB2027208-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW057I	21/04/2021	EB2111112	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW057I	22/10/2021	EB2130815	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.49**	-	**0.73**	-	-	**0.82**	-
QLD_0861_PFASOMP	MW057I	26/11/2021	EB2134318	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW057I	4/04/2022	EB2209946	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.01**	-	**0.01**	-	-	**0.01**	-
QLD_0861_PFASOMP	MW057I	26/10/2022	EB2231850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW057I	19/04/2023	EB2312057	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW057I	29/11/2023	EB2337879-AB	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW057I	3/05/2024	EB2414909	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	MW057S	22/02/2018	EB1804971	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.17**	-	**0.31**	-	-	**0.39**	-
QLD_0861_PFAS	MW057S	6/04/2018	EB1808674	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.20**	-	**0.32**	-	-	**0.38**	-
QLD_0861_PFAS	MW057S	14/05/2019	EB1912390	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.14**	-	**0.22**	-	-	**0.26**	-
QLD_0861_PFAS	MW057S	14/05/2019	EB1913916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	MW057S	28/11/2019	EB1932183	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.11**	-	**0.23**	-	-	**0.28**	-
QLD_0861_PFASOMP	MW057S	28/04/2020	EB2011568	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.06**	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP	MW057S	15/10/2020	EB2027208-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.11**	-	**0.20**	-	-	**0.25**	-
QLD_0861_PFASOMP	MW057S	21/04/2021	EB2111112	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.08**	-	**0.10**	-	-	**0.10**	-
QLD_0861_PFASOMP	MW057S	22/10/2021	EB2130815	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW057S	26/11/2021	EB2134318	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.05**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	MW057S	4/04/2022	EB2209946	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.67**	-	**0.96**	-	-	**1.05**	-
QLD_0861_PFASOMP	MW057S	4/04/2022	EB2209942	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.76**	-	**1.08**	-	-	**1.20**	-
QLD_0861_PFASOMP	MW057S	4/04/2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02

TABLE A2: Groundwater Analytical Summary

	PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorotetradecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0002	0.01	0.0002	0.02	0.05	0.0002	0.02
PFAS NEMP 2020 Drinking Water												0.07						
PFAS NEMP 2020 Freshwater 95%																		
PFAS NEMP 2020 Freshwater 99%																		
Project ID	**Location Code**	**Date**	**Lab Report Number**															
QLD_0861_PFASOMP	MW057S	26/10/2022	EB2231850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	**2.57**	-	**3.59**	-	-	**3.97**	-
QLD_0861_PFASOMP_23	MW057S	19/04/2023	EB2312057	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.25**	-	**1.95**	-	-	**2.18**	-
QLD_0861_PFASOMP_23	MW057S	19/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.20**	-	**1.79**	-	-	**2.07**	-
QLD_0861_PFASOMP_23	MW057S	19/04/2023	RN1393124	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW057S	29/11/2023	EB2337879-AB	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.11**	-	**1.50**	-	-	**1.72**	-
QLD_0861_PFASOMP_24	MW057S	3/05/2024	EB2414909	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.42**	-	**0.52**	-	-	**0.61**	-
QLD_0861_PFAS	MW309	2/05/2019	217104	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**1.4**	-	-	-	-	**1.8**	-
QLD_0861_PFAS	MW309	8/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFAS	MW309	8/05/2019	EB1911948	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFAS	MW309	27/11/2019	EB1932183	<0.05	**0.08**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP	MW309	27/04/2020	EB2011562	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW309	13/10/2020	EB2027172	<0.05	**0.06**	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	<0.05	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	MW309	20/04/2021	EB2111121	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW309	26/10/2021	EB2130850	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	MW309	30/03/2022	EB2209950	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP	MW309	25/10/2022	EB2231825	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP_23	MW309	20/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW309	20/04/2023	EB2312062-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	MW309	20/04/2023	RN1393124	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	MW309	27/10/2023	EB2333887-AA	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW309	15/04/2024	EB2413910	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP_24	MW535	11/07/2024	EB2423759	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	MW536	11/07/2024	EB2423759	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**1.56**	-	2.35	-	-	**2.47**	-
QLD_0861_PFASOMP_24	MW537	11/07/2024	EB2423759	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.44**	-	1.53	-	-	**1.72**	-
QLD_0861_PFASOMP_24	MW538	11/07/2024	EB2423759	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.05**	-	0.05	-	-	**0.05**	-
QLD_0861_PFASOMP_24	MW539	11/07/2024	EB2423759	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.26**	-	13.6	-	-	**16.1**	-
QLD_0861_PFASOMP_24	MW539	11/07/2024	EB2423759	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**4.10**	-	13.7	-	-	**16.0**	-

Environmental Standards

HEPA, January 2020, PFAS NEMP 2020 Drinking Water

HEPA, January 2020, PFAS NEMP 2020 Freshwater 95%

HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

TABLE A3: Surface Water Parameters

Location ID	Location	Sample Date	DO (mg/L)	EC (µS/cm)	pH	Eh(mV)	Temp (°C)	Turbidity	Odour	Sheen	Sample Method/Comments
SW002	Drain	15/04/2020	6.8	427.5	7.6	216.9	20.1	-	Slight organic odour	Slight organic sheen	Grab sample
SW002	Drain	16/10/2020	-	-	7.22	290.6	34.6	-	Slight organic odour	Biosheen appearance	Grab sample
SW002	Drain	30/03/2021	2.61	290.7	7.34	304.4	24.2	-	No odour	No sheen	Grab sample
SW002	Drain	25/10/2021	0.11	248.2	6.88	213.2	23.2	-	No odour	Slight sheen	Grab sample
SW002	Drain	28/03/2022	3.32	195.6	7.18	251.5	23.3	-	No odour	No sheen	Grab sample
SW002	Drain	21/10/2022	6.36	251.7	7.76	210.4	21.2	-	No odour	No sheen	Grab sample
SW002	Drain	18/04/2023	1.18	137.4	6.97	238.6	23.5	-	No odour	No sheen	Grab sample
SW002	Drain	27/10/2023	4.89	475.3	7.72	280.1	21.8	Clear, low turbidity	No odour	Slight sheen	Grab sample
SW002	Drain	10/04/2024	2.08	175.1	6.75	186.8	22.6	Clear, moderate turbidity	No odour	Slight sheen	Grab sample
SW003	Drain	15/04/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW003	Drain	16/10/2020	-	-	6.94	303.1	26.2	-	Slight organic odour	No sheen	Grab sample
SW003	Drain	30/03/2021	5.25	433.8	7.7	304.5	27.1	-	No odour	No sheen	Grab sample
SW003	Drain	22/10/2021	3.14	141.3	8.06	250.2	22.8	-	No odour	No sheen	Grab sample
SW003	Drain	28/03/2022	4.7	245.4	7.42	255.1	22.4	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	14/04/2020	3.73	557	7.69	318.4	20.3	-	Slight organic odour	No sheen	Grab sample
SW004	Warrill Creek	12/10/2020	3.21	369	7.39	319.1	20.5	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	14/04/2021	5.97	371.3	7.47	348.3	20.5	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	19/10/2021	5.71	594	7.37	343.2	19.7	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	29/03/2022	5.7	437.1	7.45	254	22.7	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	18/10/2022	6.58	539.7	7.01	195.9	20.9	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	28/04/2023	1.13	641	7.71	221.4	20.3	-	No odour	No sheen	Grab sample
SW004	Warrill Creek	25/10/2023	2.84	631	7.56	326.7	23.7	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW004	Warrill Creek	9/04/2024	5.09	315.2	7.23	255.6	24.1	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW005	Warrill Creek	14/04/2020	3.54	552	7.68	314.7	19.7	-	Slight organic odour	No sheen	Grab sample
SW005	Warrill Creek	12/10/2020	0.69	185	7.44	209.5	19.8	-	Slight organic odour	No sheen	Grab sample
SW005	Warrill Creek	12/04/2021	5.21	303.5	7.61	307.9	21	-	No odour	No sheen	Grab sample
SW005	Warrill Creek	19/10/2021	5.72	594	7.43	346.7	19.7	-	No odour	No sheen	Grab sample
SW005	Warrill Creek	29/03/2022	6.08	444.1	7.58	270.8	22.7	-	No odour	No sheen	Grab sample
SW003	Drain	21/10/2022	7.28	183.1	7.9	197.2	21.5	-	No odour	No sheen	Grab sample
SW003	Drain	18/04/2023	3.32	246	6.72	248.1	23.7	-	No odour	No sheen	Grab sample
SW003	Drain	29/11/2023	4.08	275.8	6.06	413.9	22.6	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW003	Drain	10/04/2024	7.68	240.7	8.75	210.9	26.5	Clear, low turbidity	No odour	No sheen	Grab sample
SW008	Drain	17/04/2020	2.43	681	7.25	250.4	22.6	-	No odour	No sheen	Grab sample
SW008	Drain	13/10/2020	-	-	6.98	390.1	27.1	-	Slight organic odour	No sheen	Grab sample
SW008	Drain	14/04/2021	1.88	234.3	6.93	206.6	18.4	-	No odour	Biosheen Appearance	Grab sample
SW005	Warrill Creek	18/10/2022	2.85	498.6	6.93	133.8	20	-	No odour	No sheen	Grab sample
SW005	Warrill Creek	28/04/2023	0.58	208.7	7.1	234.4	21.6	-	No odour	No sheen	Grab sample
SW005	Warrill Creek	25/10/2023	3.08	631	7.57	329.1	24.2	Brown, moderately turbid	No odour	No sheen	Grab sample
SW005	Warrill Creek	9/04/2024	4.07	315.4	7.34	259.1	24	Brown, moderately turbid	No odour	No sheen	Grab sample
SW009	Warrill Creek	15/04/2020	5.26	579	8.08	300.8	21.5	-	No odour	No sheen	Grab sample
SW009	Warrill Creek	12/10/2020	2.91	415.5	8.03	217.8	20	-	Slight organic odour	Biosheen appearance	Grab sample
SW009	Warrill Creek	14/04/2021	5.92	377.4	7.42	379.3	20.5	-	No odour	No sheen	Grab sample
SW008	Drain	25/10/2021	1.02	298.2	6.99	240.3	22.9	-	Organic odour	No sheen	Grab sample
SW008	Drain	28/03/2022	4.61	210.5	7.6	260.7	23	-	No odour	No sheen	Grab sample
SW008	Drain	28/03/2022	0.36	418.2	6.78	296.17	24.2	-	No odour	No sheen	Grab sample
SW008	Drain	28/04/2023	0.75	1045	7.38	176.7	24.1	-	No odour	No sheen	Grab sample
SW008	Drain	25/10/2023	1.67	880	7.05	343.3	23.4	Light brown, moderately turbid	Organic and sulfuric	No sheen	Grab sample
SW008	Drain	12/04/2024	4.76	71.6	7.2	249.9	24.3	Brown, moderately turbid	Sewage odour	No sheen	Grab sample
SW011	Drain	15/04/2020	7.71	322.4	7.86	339.1	24.2	-	Organic odour	Slight organic sheen	Grab sample
SW009	Warrill Creek	22/10/2021	4.99	518.3	7.41	318.6	21.9	-	No odour	No sheen	Grab sample
SW009	Warrill Creek	29/03/2022	4.01	280.2	7.22	222.7	22.5	-	No odour	No sheen	Grab sample
SW009	Warrill Creek	18/10/2022	6.28	814	6.57	195.9	21.8	-	No odour	No sheen	Grab sample
SW009	Warrill Creek	28/04/2023	-	640	6.8	220.2	21.2	-	No odour	No sheen	Grab sample
SW009	Warrill Creek	25/10/2023	2.68	632	7.54	323.9	23.6	Light green, moderately turbid	Organic odour	No sheen	Grab sample
SW009	Warrill Creek	12/04/2024	5.44	362.1	7.41	223.6	24.3	Brown, moderately turbid	No odour	No sheen	Grab sample
SW015	Warrill Creek	14/04/2020	3.84	558	7.67	287.9	20.3	-	Slight organic odour	No sheen	Grab sample
SW015	Warrill Creek	12/10/2020	4.64	389.9	7.92	240.7	24	-	No odour	No sheen	Grab sample
SW015	Warrill Creek	12/04/2021	5.06	303.5	7.23	320.7	21	-	No odour	No sheen	Grab sample
SW015	Warrill Creek	19/10/2021	4.69	847	7.48	335.6	20.1	-	No odour	No sheen	Grab sample
SW015	Warrill Creek	29/03/2022	5.31	442.4	7.62	235.8	22.8	-	No odour	No sheen	Grab sample
SW015	Warrill Creek	18/10/2022	7.44	542.4	6.85	193.9	20.9	-	No odour	No sheen	Grab sample
SW015	Warrill Creek	26/04/2023	1.28	709	7.73	229.6	20.3	-	Organic odour	No sheen	Grab sample
SW015	Warrill Creek	25/10/2023	3.1	542	7.29	277.6	24.6	Light brown, low turbidity	Organic odour	No sheen	Grab sample
SW015	Warrill Creek	9/04/2024	3.97	338.7	7.22	218.3	26.9	Brown, moderately turbid	Organic odour	No sheen	Grab sample
SW016	Warrill Creek	14/04/2020	3.83	578	7.68	294.7	20.3	-	Slight organic odour	No sheen	Grab sample
SW016	Warrill Creek	12/10/2020	-	396	8.88	228.5	24.5	-	Slight organic odour	No sheen	Grab sample
SW016	Warrill Creek	12/04/2021	5.02	306.8	7.31	320.2	21.1	-	No odour	No sheen	Grab sample
SW016	Warrill Creek	19/10/2021	6.91	869	6.82	340.8	19.7	-	No odour	No sheen	Grab sample
SW016	Warrill Creek	29/03/2022	6.53	440.4	7.54	237.9	22.8	-	No odour	No sheen	Grab sample
SW016	Warrill Creek	18/10/2022	6.73	592.5	7.2	208	20.9	-	No odour	No sheen	Grab sample
SW016	Warrill Creek	28/04/2023	0.27	688	7.62	212.6	20.4	-	No odour	No sheen	Grab sample
SW016	Warrill Creek	25/10/2023	2.8	637	7.53	264.7	24.2	Clear, moderately turbid	Organic odour	No sheen	Grab sample
SW016	Warrill Creek	9/04/2024	4.74	320	7.26	253.7	24.2	Brown, moderately turbid	No odour	No sheen	Grab sample
SW018	Warrill Creek	14/04/2020	4.06	577	7.79	303.7	19.8	-	No odour	No sheen	Grab sample
SW018	Warrill Creek	12/10/2020	2.61	369.1	7.72	245.6	20.1	-	No odour	No sheen	Grab sample
SW018	Warrill Creek	12/04/2021	5	300.9	7.22	324.9	20.9	-	No odour	No sheen	Grab sample
SW018	Warrill Creek	19/10/2021	5.2	849	7.52	332.5	19.9	-	No odour	No sheen	Grab sample
SW011	Drain	16/10/2020	-	-	9.04	268.2	35.5	-	Slight organic odour	No sheen	Grab sample
SW011	Drain	30/03/2021	7.45	526	8.01	300.9	25.7	-	No odour	Biosheen Appearance	Grab sample
SW011	Drain	25/10/2021	7.03	415.7	7.54	285.5	25.2	-	No odour	No sheen	Grab sample
SW011	Drain	28/03/2022	4.69	211	7.36	277	23.8	-	No odour	No sheen	Grab sample
SW011	Drain	18/10/2022	-	-	-	-	-	-	-	-	Not sampled: In an exclusion zone for underground service
SW011	Drain	17/04/2023	2.97	702	7.06	276.3	27.4	-	No odour	No sheen	Grab sample
SW011	Drain	24/10/2023	8.04	331.5	10.61	197.2	31.2	Green/brown highly turbid	No odour	Biosheen	Grab sample
SW025	Bremer River	14/04/2020	1.53	242.7	7.4	533.9	20.9	-	Slight organic odour	No sheen	Grab sample
SW025	Bremer River	14/10/2020	4.1	285.3	8.01	232.4	24.5	-	Slight organic odour	No sheen	Grab sample
SW025	Bremer River	21/04/2021	4.82	248	7.6	238.5	22.8	-	No odour	Slight biosheen	Grab sample
SW025	Bremer River	21/10/2021	4.27	168.9	6.78	345.5	20.5	-	No odour	No sheen	Grab sample
SW025	Bremer River	28/03/2022	6.73	654	7.93	259.4	23.4	-	No odour	No sheen	Grab sample
SW025	Bremer River	20/10/2022	4.12	783	7.23	212.3	20	-	No odour	No sheen	Grab sample
SW025	Bremer River	26/04/2023	-	1774	8	266.8	21	-	Organic odour	No sheen	Grab sample
SW018	Warrill Creek	29/03/2022	5.71	433.7	7.72	280.1	22.8	-	No odour	No sheen	Grab sample
SW018	Warrill Creek	18/10/2022	6.51	540.3	7.11	208	20.7	-	No odour	No sheen	Grab sample
SW018	Warrill Creek	28/04/2023	1.01	657	7.61	243.1	21.2	-	No odour	No sheen	Grab sample
SW018	Warrill Creek	25/10/2023	3.08	6.5	7.58	317	25.5	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW018	Warrill Creek	9/04/2024	4.95	324.5	7.44	242.4	25.5	Brown, highly turbid	No odour	No sheen	Grab sample
SW020	Warrill Creek	14/04/2020	4.02	577	7.61	235.2	19.8	-	Slight organic odour	No sheen	Grab sample
SW020	Warrill Creek	12/10/2020	3.55	369.3	7.47	263.2	20.4	-	No odour	No sheen	Grab sample
SW011	Drain	9/04/2024	1.57	389.6	6.95	208.5	26.3	Brown, low turbidity	Organic odour	Biosheen	Grab sample
SW021	Drain	20/04/2020	6.01	372.8	8.21	240.6	20.8	-	No odour	No sheen	Grab sample
SW021	Drain	14/10/2020	-	-	7.75	300.5	25.9	-	No odour	No sheen	Grab sample
SW021	Drain	30/03/2021	3	768	7.73	309.8	23.4	-	Slight Organic Odour	No sheen	Grab sample
SW021	Drain	20/10/2021	3.95	315.5	8.32	281.6	21.3	-	Slight organic odour	No sheen	Grab sample
SW021	Drain	31/03/2022	4.85	273.5	6.83	274.4	23.2	-	No odour	No sheen	Grab sample
SW021	Drain	21/10/2022	6.15	349.8	7.29	187.6	20.8	-	No odour	No sheen	Grab sample
SW021	Drain	26/04/2023	-	322.5	9.49	238.4	21.2	-	No odour	No sheen	Grab sample
SW021	Drain	29/11/2023	2.38	237.5	6.99	338.2	30.8	Light orange, slightly turbid	No odour	No sheen	Grab sample
SW021	Drain	10/04/2024	2.57	253.1	6.89	213.1	20.6	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW027	Drain	15/04/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW027	Drain	16/10/2020	-	-	-	-	-	-	-	-	Not sampled -dry during three visits
SW027	Drain	30/03/2021	3.63	664	7.4	304.2	23.4	-	No odour	Biosheen Appearance	Grab sample
SW027	Drain	25/10/2021	5.12	666	7.45	290	21.5	-	No odour	No sheen	Grab sample
SW027	Drain	28/03/2022	4.56	37.3	6.84	131.7	22.2	-	No odour	No sheen	Grab sample
SW027	Drain	21/10/2022	8.89	92.3	8.21	218.6	21.1	-	No odour	No sheen	Grab sample
SW027	Drain	17/04/2023	0.97	524.1	7.04	275.3	23	-	No odour	No sheen	Grab sample
SW027	Drain	25/10/2023	4.26	379.2	6.96	332.9	25.3	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW027	Drain	9/04/2024	4.11	500	7.69	222.9	25.2	Brown, low turbidity	No odour	Biosheen	Grab sample
SW028	Drain	14/04/2020	0.87	260.6	7.71	263.9	20.3	-	Slight organic odour	No sheen	Grab sample
SW028	Drain	12/10/2020	-	-	7.61	291.3	30.7	-	No odour	No sheen	Grab sample
SW028	Drain	12/04/2021	3.36	150.3	6.75	325.2	24.1	-	No odour	No sheen	Grab sample
SW028	Drain	19/10/2021	3.95	199.1	6.76	330	19	-	No odour	No sheen	Grab sample
SW028	Drain	29/03/2022	3.31	141.8	7.06	385.5	21.1	-	No odour	No sheen	Grab sample
SW028	Drain	18/10/2022	8.69	447.2	6.75	208.3	22.5	-	No odour	No sheen	Grab sample
SW028	Drain	9/04/2023	1.23	642	6.95	230.3	21.3	-	No odour	No sheen	Grab sample
SW028	Drain	29/11/2023	3.71	487.3	7.45	315.7	25	Light brown, moderately turbid	No odour	Biosheen	Grab sample
SW028	Drain	9/04/2024	8.01	501.1	7.61	305.6	22	Brown, moderate turbidity	Organic odour	Biosheen	Grab sample
SW020	Warrill Creek	12/04/2021	5.53	300.5	7.28	322.7	20.9	-	No odour	No sheen	Grab sample
SW020	Warrill Creek	19/10/2021	5.12	844	7.57	333.7	19.8	-	No odour	No sheen	Grab sample
SW020	Warrill Creek	29/03/2022	5.97	434.2	7.74	285.7	22.8	-	No odour	No sheen	Grab sample
SW020	Warrill Creek	18/10/2022	7.12	540.2	7.19	216.9	20.7	-	No odour	No sheen	Grab sample
SW020	Warrill Creek	28/04/2023	-	631	7.64	237.1	20.2	-	No odour	No sheen	Grab sample
SW020	Warrill Creek	25/10/2023	3.63	651	7.57	318	26	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW020	Warrill Creek	9/04/2024	4.76	327.1	7.93	233.1	25.7	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW025	Bremer River	26/10/2023	4.9	1969	8.42	272.6	25.8	Green, moderately turbid	Organic odour	Biosheen	Grab sample
SW025	Bremer River	12/04/2024	3.78	355.4	7.19	225.9	25.2	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW036	Bremer River	15/04/2020	0.92	346.3	7.44	209.6	20	-	No odour	No sheen	Grab sample
SW036	Bremer River	14/10/2020	2.92	372.4	8	223.9	18.7	-	Slight organic odour	Biosheen appearance	Grab sample
SW036	Bremer River	14/04/2021	2.26	224.5	6.95	339.5	20.5	-	No odour	No sheen	Grab sample

TABLE A3: Surface Water Parameters

Location ID	Location	Sample Date	DO (mg/L)	EC (µS/cm)	pH	Eh(mV)	Temp (°C)	Turbidity	Odour	Sheen	Sample Method/Comments
SW036	Bremer River	20/10/2021	3.92	238.5	7.12	282.1	19.5	-	No odour	No sheen	Grab sample
SW036	Bremer River	1/04/2022	5.8	408	7.4	219.9	23.1	-	No odour	No sheen	Grab sample
SW030	Drain	15/04/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW030	Drain	16/10/2020	-	-	8.81	295.4	24.9	-	No odour	No sheen	Grab sample
SW030	Drain	30/03/2021	5.02	530	8.26	293.2	28.6	-	No odour	No sheen	Grab sample
SW030	Drain	26/10/2021	2.18	728	7.02	187.1	25.8	-	Organic odour	Sheen	Grab sample
SW030	Drain	28/03/2022	3.67	153.7	7.24	200.7	23.8	-	No odour	No sheen	Grab sample
SW030	Drain	21/10/2022	6.63	375.1	7.28	207.4	20.8	-	No odour	No sheen	Grab sample
SW030	Drain	17/04/2023	1.36	202	7.4	249.2	24.6	-	No odour	No sheen	Grab sample
SW030	Drain	24/10/2023	9.97	211.9	8.78	187.9	32	Brown, highly turbid	Hydrocarbon odour	Oil sheen	Grab sample
SW030	Drain	9/04/2024	3.95	292.8	7.35	210.2	25.1	Clear, highly turbid	Organic odour	No sheen	Grab sample
SW033	Drain	27/04/2020	4.23	538	8.12	157.6	28	-	No odour	No sheen	Grab sample
SW033	Drain	15/10/2020	-	-	-	212.9	-	-	-	-	Not sampled -dry during three visits
SW033	Drain	14/04/2021	2.95	954	7.58		18.1	-	No odour	No sheen	Grab sample
SW033	Drain	26/10/2021	4.26	474	7.54	284.6	25.4	-	Organic odour	No sheen	Grab sample
SW033	Drain	4/04/2022	8.78	372.3	7.73	167.5	27.2	-	No odour	No sheen	Grab sample
SW036	Bremer River	19/10/2022	4.14	93.7	7.15	192.7	20.4	-	No odour	No sheen	Grab sample
SW036	Bremer River	22/05/2023	2.8	321.6	6.03	357.8	13.1	-	No odour	No sheen	Grab sample
SW036	Bremer River	24/10/2023	3.92	1842	7.88	277.7	23.5	Yellow, slightly turbidity	Organic odour	No sheen	Grab sample
SW036	Bremer River	11/04/2024	3.77	315.4	7.2	174	23.6	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW039	Bremer River	14/04/2020	5.77	312.3	7.77	527.7	17.5	-	Slight organic odour	No sheen	Grab sample
SW039	Bremer River	14/10/2020	8.39	445.6	8.12	248.7	23.5	-	Slight organic odour	No sheen	Grab sample
SW039	Bremer River	30/03/2021	5	175.3	7.18	273.9	25.3	-	No odour	No sheen	Grab sample
SW039	Bremer River	21/10/2021	4.11	181.1	6.59	340.3	20.7	-	No odour	No sheen	Grab sample
SW039	Bremer River	28/03/2022	4.6	628	7.73	268.1	23.6	-	No odour	No sheen	Grab sample
SW039	Bremer River	20/10/2022	4.79	616	7.09	215.9	20.5	-	No odour	No sheen	Grab sample
SW039	Bremer River	26/04/2023	-	1768	8.17	265.8	19.5	-	No odour	No sheen	Grab sample
SW039	Bremer River	26/10/2023	3.61	2045	8.2	284.5	25.8	Light brown, moderately turbid	Organic odour	No sheen	Grab sample
SW039	Bremer River	12/04/2024	3.98	321.2	7.16	213.7	24.8	Brown, moderately turbid	Organic odour	No sheen	Grab sample
SW040	Bremer River	14/04/2020	7.94	673	7.96	369.1	25.2	-	No odour	No sheen	Grab sample
SW033	Drain	25/10/2022	5.03	380.7	7.6	256	32.6	-	No odour	No sheen	Grab sample
SW033	Drain	27/04/2023	-	-	-	-	-	-	-	-	Not sampled - dry
SW033	Drain	29/11/2023	1.95	320.9	7.11	337.6	32.9	Light orange, slightly turbid	No odour	No sheen	Grab sample
SW033	Drain	19/04/2024	-	-	-	-	-	-	-	-	Dry
SW037	Drain	15/04/2020	1.64	1097	7.03	89.2	29.7	-	Organic odour	Slight organic sheen	Grab sample
SW037	Drain	14/10/2020	0.11	1797	7.76	45.7	26.4	-	Organic odour	Biosheen appearance	Grab sample
SW037	Drain	30/03/2021	0.66	609	6.96	231.3	27.1	-	Slight Organic Odour	No sheen	Grab sample
SW026	Warrill Creek	21/04/2020	4.2	712	8.24	230.2	20	-	No odour	No sheen	Grab sample
SW026	Warrill Creek	15/10/2020	5.1	500	8.06	302.8	25.4	-	No odour	Biosheen appearance	Grab sample
SW026	Warrill Creek	13/04/2021	5.39	327.3	7.58	310.6	24.1	-	No odour	No sheen	Grab sample
SW026	Warrill Creek	20/10/2021	1.88	433.4	6.8	307.2	24.5	-	No odour	No sheen	Grab sample
SW026	Warrill Creek	1/04/2022	5.68	336.6	7.65	271.3	23.4	-	No odour	No sheen	Grab sample
SW026	Warrill Creek	20/10/2022	5.24	441.7	7.39	220.6	20.4	-	No odour	No sheen	Grab sample
SW026	Warrill Creek	19/04/2023	0.87	662	7.41	245	21.8	-	Organic odour	No sheen	Grab sample
SW040	Bremer River	15/10/2020	5.88	516	8.28	206.4	23.9	-	No odour	No sheen	Grab sample
SW040	Bremer River	15/04/2021	3.9	460.8	8.32	225	23.2	-	No odour	No sheen	Grab sample
SW040	Bremer River	19/10/2021	3.98	621	7.28	336.5	20.4	-	No odour	No sheen	Grab sample
SW040	Bremer River	28/03/2022	5.84	311.1	7.77	282.1	23.5	-	No odour	No sheen	Grab sample
SW040	Bremer River	20/10/2022	8.02	536.2	7.34	232.1	20.4	-	No odour	No sheen	Grab sample
SW040	Bremer River	18/04/2023	0.74	670	6.93	235.6	21.4	-	Organic odour	No sheen	Grab sample
SW040	Bremer River	26/10/2023	4.46	856	8.01	284.7	28	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW040	Bremer River	12/04/2024	3.8	352.6	6.75	216.9	21.5	Brown, highly turbid	No odour	No sheen	Grab sample
SW045	Bremer River	15/04/2020	2.7	641	7.63	449.6	20.8	-	Slight organic odour	No sheen	Grab sample
SW045	Bremer River	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW045	Bremer River	15/04/2021	4.41	338.1	7.96	288.5	19.8	-	Organic odour	No sheen	Grab sample
SW045	Bremer River	19/10/2021	3.71	706	7.28	327.6	20.4	-	No odour	No sheen	Grab sample
SW045	Bremer River	29/03/2022	5.48	425.6	7.54	258.3	22.8	-	No odour	No sheen	Grab sample
SW045	Bremer River	20/10/2022	6.51	532.9	7.51	221.1	20.5	-	No odour	No sheen	Grab sample
SW037	Drain	26/10/2021	0.11	549	7.08	205.5	26.8	-	Organic odour	Sheen	Grab sample
SW037	Drain	30/03/2022	3.73	205.9	7.02	275.3	22.4	-	No odour	No sheen	Grab sample
SW037	Drain	21/10/2022	2.81	314	7.28	319.8	20.6	-	No odour	No sheen	Grab sample
SW037	Drain	18/04/2023	0.85	503	6.55	261.9	21	-	No odour	No sheen	Grab sample
SW037	Drain	27/10/2023	4.22	1359	7.29	251.9	20	Light brown, slightly turbid	Organic odour	No sheen	Grab sample
SW037	Drain	10/04/2024	3.39	382.2	6.85	195.4	24.2	Brown, moderate turbidity	No odour	Biosheen	Grab sample
SW038	Drain	14/04/2020	4.03	418.6	7.9	320.6	24.9	-	No odour	No sheen	Grab sample
SW038	Drain	16/10/2020	-	-	7.31	286.1	26.5	-	Organic odour	No sheen	Grab sample
SW038	Drain	30/03/2021	4.04	760	7.63	321.4	29.8	-	Slight Organic Odour	No sheen	Grab sample
SW038	Drain	25/10/2021	5.71	536	7.45	307.4	27.1	-	No odour	Sheen	Grab sample
SW038	Drain	30/03/2022	7.72	52.3	7.45	358.8	23.9	-	No odour	No sheen	Grab sample
SW038	Drain	24/10/2022	8.56	203.8	6.96	155	21.3	-	No odour	No sheen	Grab sample
SW038	Drain	21/04/2023	-	-	-	-	-	-	-	-	Not sampled - dry
SW038	Drain	29/11/2023	3.19	325.6	6.85	315.3	26.6	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW045	Bremer River	18/04/2023	0.82	586	7.07	238.3	21.7	-	Organic odour	No sheen	Grab sample
SW045	Bremer River	26/10/2023	6.07	757	8.09	298	26.9	Clear, highly turbid	No odour	Biosheen	Grab sample
SW045	Bremer River	12/04/2024	5.28	356.8	7.23	216.8	21.4	Brown, moderate turbidity	No odour	Biosheen	Grab sample
SW047	Bremer River	12/10/2020	7.17	302.1	9.18	225	22.8	-	No odour	No sheen	Grab sample
SW047	Bremer River	14/04/2021	3.51	223.5	7.04	320.5	20.1	-	No odour	No sheen	Grab sample
SW047	Bremer River	20/10/2021	3.61	228.2	6.71	341.6	20.2	-	No odour	No sheen	Grab sample
SW047	Bremer River	31/03/2022	4.66	373.2	7.63	298.8	22.6	-	No odour	No sheen	Grab sample
SW047	Bremer River	19/10/2022	5.31	796.1	7.15	179.9	20.5	-	No odour	No sheen	Grab sample
SW047	Bremer River	22/05/2023	6.3	1430	6.55	354.2	14.9	-	No odour	No sheen	Grab sample
SW047	Bremer River	23/10/2023	4.69	905	7.55	265.6	28.6	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW047	Bremer River	11/04/2024	4.2	315.5	7.22	192.3	22.8	Brown, low turbidity	No odour	No sheen	Grab sample
SW047*	Bremer River	15/04/2020	-	-	-	-	-	-	Slight organic odour	No sheen	Grab sample
SW050	Bremer River	15/04/2020	8.9	409.3	8.94	297.5	26.2	-	No odour	No sheen	Grab sample
SW050	Bremer River	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW050	Bremer River	14/04/2021	3.04	226.4	7.18	330.4	20.2	-	No odour	No sheen	Grab sample
SW050	Bremer River	19/10/2021	3.85	237.8	7.07	262.8	19.3	-	No odour	No sheen	Grab sample
SW050	Bremer River	1/04/2022	6.02	406.2	7.34	280.5	22.9	-	No odour	No sheen	Grab sample
SW050	Bremer River	20/10/2022	-	-	-	-	-	-	-	-	Not accessible due to site conditions
SW050	Bremer River	11/05/2023	1.44	253	7.08	253.2	23.5	-	No odour	No sheen	Grab sample
SW050	Bremer River	24/10/2023	2.89	626	7.33	291.2	26.9	Light yellow, slightly turbid	No odour	No sheen	Grab sample
SW050	Bremer River	11/04/2024	4.01	316	7.23	215.2	22.4	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW038	Drain	18/04/2024	-	-	-	-	-	-	-	-	Dry
SW041	Drain	15/04/2020	2.01	475.5	8.32	289.2	23.3	-	No odour	No sheen	Grab sample
SW041	Drain	15/10/2020	4.87	454.3	7.61	262	21.9	-	Slight organic odour	Biosheen appearance	Grab sample
SW041	Drain	30/03/2021	1.35	335.1	9.89	228.7	27.9	-	Slight Organic Odour	Biosheen Appearance	Grab sample
SW041	Drain	26/10/2021	1.58	294.5	7.66	240.2	25.2	-	Organic odour	Sheen	Grab sample
SW041	Drain	28/03/2022	7.86	183	7.86	317	22.8	-	No odour	No sheen	Grab sample
SW041	Drain	20/10/2022	6.59	185.8	7.63	188.4	20.2	-	No odour	No sheen	Grab sample
SW041	Drain	18/04/2023	0.37	266.2	7.12	237.4	29.2	-	No odour	Slight sheen	Grab sample
SW041	Drain	26/10/2023	-	-	-	-	-	-	-	-	Dry
SW041	Drain	12/04/2024	6.53	251.7	7.38	206.4	21.3	Brown, low turbidity	No odour	Biosheen	Grab sample
SW048	Drain	14/04/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW048	Drain	12/10/2020	-	-	-	-	-	-	-	-	Dry during three visits
SW048	Drain	12/04/2021	-	-	-	-	-	-	-	-	Dry- no sample collected
SW048	Drain	18/10/2021	-	-	-	-	-	-	-	-	Not sampled - dry
SW048	Drain	28/03/2022	8.58	20.2	7.86	525	23.5	-	No odour	No sheen	Grab sample
SW048	Drain	21/10/2022	5.97	33.6	7.48	204.5	21.3	-	No odour	No sheen	Grab sample
SW048	Drain	27/04/2023	2.53	467.9	7.96	297.6	20.6	-	No odour	No sheen	Grab sample
SW048	Drain	27/10/2023	5.69	146.5	7.73	281.1	20	Clear, non-turbid	No odour	No sheen	Grab sample
SW048	Drain	11/04/2024	-	-	-	-	-	-	-	-	Dry
SW049	Drain	27/04/2020	3.33	227.8	8.62	241.3	21.3	-	Organic odour	No sheen	Grab sample
SW049	Drain	13/10/2020	3.05	344.7	7.23	226.1	27.7	-	No odour	No sheen	Grab sample
SW049	Drain	13/04/2021	6.2	248.3	7.42	315.4	27.3	-	No odour	No sheen	Grab sample
SW049	Drain	20/10/2021	2.96	271.2	7.27	304.3	26.6	-	No odour	No sheen	Grab sample
SW049	Drain	31/03/2022	2.59	94.7	6.38	289.7	23.5	-	No odour	No sheen	Grab sample
SW049	Drain	19/10/2022	5.89	168.7	7.32	234.2	22.4	-	No odour	No sheen	Grab sample
SW049	Drain	26/04/2023	-	196.9	7.34	234.7	22.7	-	No odour	No sheen	Grab sample
SW049	Drain	23/10/2023	3.41	1824	7.97	247.4	26.8	Yellow-green, slightly turbid	No odour	Biosheen	Grab sample
SW049	Drain	10/04/2024	1.95	156.2	6.26	232.4	22.4	Brown, low turbidity	No odour	No sheen	Grab sample
SW053	Drain	21/04/2020	5.52	843	8.62	216.5	26.2	-	No odour	No sheen	Grab sample
SW053	Drain	21/10/2020	4.86	353.1	8.26	243.1	26	-	No odour	No sheen	Grab sample
SW053	Drain	19/04/2021	6.66	372.2	9.15	331.7	26.6	-	No odour	No sheen	Grab sample
SW053	Drain	25/10/2021	7.01	340.8	7.06	247.1	26.8	-	No odour	No sheen	Grab sample
SW053	Drain	5/04/2022	9.8	419.9	8.33	148.5	28.1	-	No odour	No sheen	Grab sample
SW053	Drain	24/10/2022	7.75	402.6	6.63	149.8	22.5	-	No odour	No sheen	Grab sample
SW053	Drain	21/04/2023	0.88	506	7.02	281.1	22.3	-	Organic odour	No sheen	Grab sample
SW053	Drain	29/11/2023	5.9	284.3	6.96	362.9	25.3	Clear, non-turbid	No odour	No sheen	Grab sample
SW053	Drain	18/04/2024	5.55	666	8.07	168.3	26.1	Green, low turbidity	No odour	No sheen	Grab sample
SW056	Drain	15/04/2020	0.18	539	7.19	197.8	24.5	-	Slight organic odour	No sheen	Grab sample
SW056	Drain	19/10/2020	2.71	387.2	7.38	247	27.2	-	No odour	No sheen	Grab sample
SW056	Drain	30/03/2021	3.49	406.9	7.51	301.2	26.9	-	No odour	No sheen	Grab sample
SW056	Drain	26/10/2021	0.14	402.8	7.1	153.4	22.5	-	Organic odour	No sheen	Grab sample
SW056	Drain	28/03/2022	4.53	205.2	7.09	214.6	22.6	-	No odour	No sheen	Grab sample
SW056	Drain	21/10/2022	3.84	319.9	7.19	215.9	21.1	-	No odour	No sheen	Grab sample
SW056	Drain	18/04/2023	0.39	202.6	7.11	236.1	25.4	-	No odour	No sheen	Grab sample
SW056	Drain	24/10/2023	2.68	227.4	7.31	216.8	27.8	Light brown, slightly turbid	Organic odour	No sheen	Grab sample

TABLE A3: Surface Water Parameters

Location ID	Location	Sample Date	DO (mg/L)	EC (µS/cm)	pH	Eh(mV)	Temp (°C)	Turbidity	Odour	Sheen	Sample Method/Comments
SW056	Drain	9/04/2024	2.31	324.8	7	173.7	24.9	Clear, moderate turbidity	No odour	No sheen	Grab sample
SW059	Drain	15/04/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW059	Drain	16/10/2020	-	-	7.23	310.2	34.5	-	No odour	No sheen	Grab sample
SW059	Drain	30/03/2021	-	927	7.29	71.4	26.5	-	Slight organic odour	Biosheen Appearance	Grab sample. DO field parameter not available due
SW059	Drain	26/10/2021	0.01	616	7.01	95.7	29.7	-	Organic odour	No sheen	Grab sample
SW059	Drain	28/03/2022	6.98	105.5	7.4	281.8	23.7	-	No odour	No sheen	Grab sample
SW059	Drain	21/10/2022	4.32	332.6	7.02	138.4	20.4	-	No odour	No sheen	Grab sample
SW059	Drain	17/04/2023	1.09	513	6.98	264.6	24.9	-	No odour	No sheen	Grab sample
SW059	Drain	27/10/2023	2.61	768	6.29	305.2	21.8	Light brown, moderately turbid	No odour	No sheen	Grab sample
SW059	Drain	9/04/2024	3.82	416.2	7.41	189.6	23.7	Clear, moderate turbidity	Sulfuric odour	No sheen	Grab sample
SW064	Drain	14/04/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW051	Bremer River	15/04/2020	1.81	475.9	7.94	216	20.9	-	No odour	Organic sheen	Grab sample
SW051	Bremer River	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW051	Bremer River	12/04/2021	3.33	219.6	7.01	281.8	20.5	-	No odour	No sheen	Grab sample
SW051	Bremer River	19/10/2021	3.66	796	7.12	333.5	20.6	-	No odour	No sheen	Grab sample
SW051	Bremer River	1/04/2022	5.59	405.5	7.35	131	22.4	-	No odour	No sheen	Grab sample
SW051	Bremer River	20/10/2022	5.09	446.5	7.22	224.5	20.3	-	No odour	No sheen	Grab sample
SW051	Bremer River	19/04/2023	0.98	1017	7.15	457.5	20.5	-	Organic odour	No sheen	Grab sample
SW051	Bremer River	24/10/2023	2.11	601	7.35	194.5	23.1	Clear, moderately turbid	No odour	No sheen	Grab sample
SW051	Bremer River	11/04/2024	1.98	649	7.21	199.8	20.9	Brown, moderate turbidity	Organic odour	No sheen	Grab sample
SW052	Bremer River	20/04/2020	2.28	294	7.82	245.1	20.9	-	Organic odour	No sheen	Grab sample
SW052	Bremer River	13/10/2020	1.41	301.9	7	175.3	23	-	Slight organic odour	No sheen	Grab sample
SW052	Bremer River	13/04/2021	3.71	220	7.14	311.6	21.5	-	No odour	No sheen	Grab sample
SW052	Bremer River	20/10/2021	3.03	237.1	6.82	338.7	20.4	-	No odour	No sheen	Grab sample
SW052	Bremer River	31/03/2022	5.75	405.3	7.5	304.2	22.5	-	No odour	No sheen	Grab sample
SW052	Bremer River	19/10/2022	4.53	513.5	7.23	202.9	20.6	-	No odour	No sheen	Grab sample
SW052	Bremer River	26/04/2023	-	550	7.56	213.2	20.9	-	No odour	No sheen	Grab sample
SW052	Bremer River	24/10/2023						-			Dry
SW052	Bremer River	10/04/2024	3.87	315.8	7.2	198.2	23.7	Brown, low turbidity	No odour	No sheen	Grab sample
SW088	Bremer River	20/04/2020	6.34	333.3	8.04	212.7	18.7	-	Organic odour	No sheen	Grab sample
SW088	Bremer River	12/10/2020	0.22	824	6.5	110.2	21.4	-	No odour	No sheen	Grab sample
SW088	Bremer River	13/04/2021	3.19	223.8	7.07	321.8	21.5	-	No odour	No sheen	Grab sample
SW088	Bremer River	20/10/2021	2.32	229.3	6.75	339.3	20.3	-	No odour	No sheen	Grab sample
SW088	Bremer River	31/03/2022	5.73	406.4	7.53	309.9	22.6	-	No odour	No sheen	Grab sample
SW088	Bremer River	19/10/2022	5.31	495.2	7.19	182.8	20.6	-	No odour	No sheen	Grab sample
SW088	Bremer River	22/05/2023	2.2	1439	6.03	443.4	13.9	-	No odour	No sheen	Grab sample
SW088	Bremer River	23/10/2023	3.83	1967	8.12	-	27.3	Green, slightly turbid	Organic odour	No sheen	Grab sample
SW088	Bremer River	10/04/2024	3.85	316.3	7.19	-	24.1	Brown, low turbidity	No odour	No sheen	Grab sample
SW089	Bremer River	20/04/2020	5.61	315.4	8.04	241.4	18.1	-	No odour	No sheen	Grab sample
SW089	Bremer River	13/10/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW089	Bremer River	13/04/2021	3.17	227.6	7.51	211	21.9	-	No odour	No sheen	Grab sample
SW089	Bremer River	20/10/2021	2.3	240.5	6.86	338	20.5	-	No odour	No sheen	Grab sample
SW089	Bremer River	31/03/2022	5.91	404.9	7.19	317	22.4	-	No odour	No sheen	Grab sample
SW089	Bremer River	19/10/2022	1.41	332.2	6.94	201.7	19.1	-	No odour	No sheen	Grab sample
SW089	Bremer River	22/05/2023	8.4	1455	6.29	243.1	13.6	-	No odour	No sheen	Grab sample
SW089	Bremer River	23/10/2023	2.62	2085	7.95	304.1	28.3	Green, slightly turbid	Organic odour	Biosheen	Grab sample
SW089	Bremer River	10/04/2024	3.16	324.2	7.17	208.4	24.3	Brown, low turbidity	No odour	No sheen	Grab sample
SW090	Bremer River	20/04/2020	3.45	262.8	8.24	240.2	19.4	-	No odour	No sheen	Grab sample
SW090	Bremer River	13/10/2020	0.74	949	6.54	145.7	22	-	Slight organic odour	Biosheen appearance	Grab sample
SW090	Bremer River	13/04/2021	2.66	217.4	7.15	303.6	20.5	-	No odour	No sheen	Grab sample
SW090	Bremer River	21/10/2021	3.03	207.3	7.29	295.7	21.4	-	No odour	No sheen	Grab sample
SW090	Bremer River	31/03/2022	5.19	402.2	7.42	284.8	22.6	-	No odour	No sheen	Grab sample
SW090	Bremer River	21/10/2022	5.45	616	7.19	183	19.8	-	No odour	No sheen	Grab sample
SW026	Warrill Creek	24/10/2023	5.7	829	8.03	252.9	28.3	Light brown, moderately turbid	Organic odour	Biosheen	Grab sample
SW026	Warrill Creek	11/04/2024	3.52	351.5	7.25	199.3	26.2	Brown, moderately turbid	Organic odour	No sheen	Grab sample
SW034	Warrill Creek	14/04/2020	2.91	579	7.78	325.4	20.1	-	Slight organic odour	No sheen	Grab sample
SW034	Warrill Creek	12/10/2020	1.28	379.3	7.89	585	21.4	-	Slight organic odour	No sheen	Grab sample
SW034	Warrill Creek	12/04/2021	5.08	301.4	7.24	325.3	21	-	No odour	No sheen	Grab sample
SW034	Warrill Creek	19/10/2021	5.17	754	7.52	339.2	19.9	-	No odour	No sheen	Grab sample
SW034	Warrill Creek	29/03/2022	6.38	432.8	7.67	268.9	22.8	-	No odour	No sheen	Grab sample
SW034	Warrill Creek	18/10/2022	6.45	539.9	7.14	183.5	20.7	-	No odour	No sheen	Grab sample
SW034	Warrill Creek	28/04/2023	-	458	7.97	227.4	20.4	-	No odour	No sheen	Grab sample
SW034	Warrill Creek	25/10/2023	2.61	654	7.6	318.8	26.5	Light brown, moderately turbid	No odour	Biosheen	Grab sample
SW034	Warrill Creek	9/04/2024	3.86	322	7.47	216.4	25	Light brown, moderately turbid	No odour	No sheen	Grab sample
SW043	Warrill Creek	27/04/2020	5.25	575	8.84	207.5	20.8	-	No odour	No sheen	Grab sample
SW043	Warrill Creek	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW043	Warrill Creek	14/04/2021	5.73	362.1	7.43	310.3	19.5	-	No odour	No sheen	Grab sample
SW064	Drain	20/10/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW064	Drain	18/04/2021	0.84	248.1	6.61	297.1	19.7	-	Organic odour	No sheen	Grab sample
SW043	Warrill Creek	21/10/2021	4.69	735	7.29	353.8	21.2	-	No odour	No sheen	Grab sample
SW043	Warrill Creek	4/04/2022	6.63		7.45	228.4	23.4	-	No odour	No sheen	Grab sample
SW064	Drain	25/10/2021	0.89	214.2	6.26	318.5	23.8	-	No odour	No sheen	Grab sample
SW043	Warrill Creek	20/10/2022	6.43	109.5	7.38	215	20.5	-	No odour	No sheen	Grab sample
SW064	Drain	4/04/2022	2.82	245	7.32	308.2	23.6	-	No odour	No sheen	Grab sample
SW043	Warrill Creek	19/04/2023	0.96	576	7	230.2	22.1	-	Organic odour	No sheen	Grab sample
SW043	Warrill Creek	26/10/2023	3.37	613	7.53	284.3	24.4	Clear, moderately turbid	No odour	No sheen	Grab sample
SW043	Warrill Creek	11/04/2024	5.09	350.8	7.36	209	23.3	Brown, low turbidity	No odour	No sheen	Grab sample
SW099	Warrill Creek	21/04/2020	4.4	621	8.12	227	21	-	No odour	No sheen	Grab sample
SW064	Drain	24/10/2022	6.16	144.4	7.64	197.1	22	-	No odour	No sheen	Grab sample
SW090	Bremer River	22/05/2023	-	267.2	5.17	250.1	18	-	No odour	No sheen	Grab sample
SW099	Warrill Creek	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW064	Drain	21/04/2023	0.9	732	7.61	253.2	20	-	Organic odour	No sheen	Grab sample
SW064	Drain	29/11/2023	1.9	226	6.63	323.1	28.3	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW064	Drain	18/04/2024	0.56	383.4	6.64	155.9	25.7	Brown, highly turbid	Sulfuric odour	No sheen	Grab sample
SW067	Drain	21/04/2020	0.8	340.6	7.79	221.1	22.3	-	No odour	No sheen	Grab sample
SW099	Warrill Creek	13/04/2021	5.75	359.4	7.37	323.3	20.8	-	No odour	No sheen	Grab sample
SW090	Bremer River	23/10/2023	3.51	2195	8.31	296.5	29.9	Yellow, slightly turbid	Organic odour	No sheen	Grab sample
SW067	Drain	20/10/2020	0.02	324.4	8.7	126	19.2	-	No odour	No sheen	Grab sample
SW067	Drain	19/04/2021	1.65	216.6	7.12	335.1	20.1	-	No odour	No sheen	Grab sample
SW090	Bremer River	10/04/2024	4.15	310.2	7.17	218	22.9	Brown, low turbidity	No odour	No sheen	Grab sample
SW091	Bremer River	20/04/2020	4.74	276.4	8.32	232.9	18.8	-	No odour	No sheen	Grab sample
SW067	Drain	25/10/2021	8.41	265.5	6.5	304.1	26.7	-	No odour	Slight sheen	Grab sample
SW099	Warrill Creek	20/10/2021	3.92	346.4	7.15	309.3	22.7	-	No odour	No sheen	Grab sample
SW091	Bremer River	13/10/2020	-	-	-	-	-	-	-	-	Not sampled - dry
SW091	Bremer River	31/03/2021	5.92	402.8	7.49	290.2	22.7	-	No odour	No sheen	Grab sample
SW067	Drain	6/04/2022	-	-	-	-	-	-	No odour	No sheen	Not sampled - dry
SW067	Drain	24/10/2022	5.17	125.6	7.11	194.8	27.7	-	No odour	No sheen	Grab sample
SW091	Bremer River	13/04/2021	2.81	217.4	7.03	318.6	20.3	-	No odour	No sheen	Grab sample
SW091	Bremer River	21/10/2021	4.21	202.1	7.26	287.7	20.9	-	No odour	No sheen	Grab sample
SW091	Bremer River	21/10/2022	6.33	608	7.59	193.2	19.9	-	No odour	No sheen	Grab sample
SW067	Drain	21/04/2023	0.78	683	7.08	262.2	20.1	-	Organic odour	No sheen	Grab sample
SW067	Drain	29/11/2023	1.51	276.1	6.36	322	26.1	Clear, non-turbid	No odour	No sheen	Grab sample
SW067	Drain	18/04/2024	-	-	-	-	-	-	-	-	Dry
SW076	Drain	15/04/2020	4.85	371.8	7.85	392.6	19.5	-	Slight organic odour	No sheen	Grab sample
SW076	Drain	16/10/2020	-	-	-	-	-	-	-	-	Not enough water for parameters
SW076	Drain	30/03/2021	1.88	537	7.3	305.8	25.1	-	No odour	No sheen	Grab sample
SW076	Drain	26/10/2021	0.77	403.6	7.35	288.5	25.3	-	Sulfuric odour	No sheen	Grab sample
SW076	Drain	28/03/2022	2.22	222.1	7.13	258.8	22.3	-	No odour	No sheen	Grab sample
SW091	Bremer River	22/05/2023	7.23	1545	6.55	364.2	13.8	-	No odour	No sheen	Grab sample
SW091	Bremer River	23/10/2023						-			Dry
SW091	Bremer River	10/04/2024	7.01	1521	6.51	402.2	16.9	Clear, slight turbidity	No odour	No sheen	Grab sample
SW094	Bremer River	15/04/2020	0.93	354.4	7.75	145.6	22.4	-	Slight organic odour	No sheen	Grab sample
SW094	Bremer River	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW094	Bremer River	14/04/2021	1.57	330.5	6.89	338.6	19.5	-	No odour	No sheen	Grab sample
SW099	Warrill Creek	29/03/2022	6.04	464	7.7	225.3	22.7	-	No odour	No sheen	Grab sample
SW099	Warrill Creek	20/10/2022	6.69	660	7.26	226.8	20.3	-	No odour	No sheen	Grab sample
SW076	Drain	21/10/2022	-	-	-	-	-	-	-	-	Not sampled: In an exclusion zone for underground
SW076	Drain	18/04/2023	0.51	377.5	6.99	243.5	23.5	-	No odour	No sheen	Grab sample
SW099	Warrill Creek	18/04/2023	1.08	622	7.61	231.5	20.4	-	Organic odour	No sheen	Grab sample
SW099	Warrill Creek	24/10/2023	9.36	710	7.96	282.1	27.8	Light green/brown, slightly	No odour	No sheen	Grab sample
SW076	Drain	27/10/2023	1.87	1222	7.86	204.1	23.7	Grey, highly turbid	Organic odour	No sheen	Grab sample
SW099	Warrill Creek	11/04/2024	1.21	702	7.45	226.7	21.2	Brown, moderate turbidity	Organic odour	No sheen	Grab sample
SW076	Drain	9/04/2024	4.86	490	7.38	215	27	Brown, moderately turbid	Organic odour	No sheen	Grab sample
SW100	Warrill Creek	21/04/2020	4.8	603	8.31	238.7	20.1	-	Organic odour	No sheen	Grab sample
SW100	Warrill Creek	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW100	Warrill Creek	13/04/2021	5.55	356.8	7.5	316.1	20.5	-	No odour	No sheen	Grab sample
SW100	Warrill Creek	20/10/2021	4.42	325.5	7.29	308.5	21.8	-	No odour	No sheen	Grab sample
SW079	Drain	21/04/2020	9.24	492.4	8.43	228.5	21.6	-	No odour	No sheen	Grab sample
SW094	Bremer River	22/10/2021	3.97	168.1	7.36	300	22.7	-	No odour	No sheen	Grab sample
SW100	Warrill Creek	29/03/2022	6.35	454.4	7.71	240.8	22.7	-	No odour	No sheen	Grab sample
SW079	Drain	20/10/2020	-	354.6	8.06	236.9	19.9	-	No odour	No sheen	Grab sample
SW079	Drain	19/04/2021	6.46	376	7.3	369.7	21.2	-	Organic odour	Biosheen Appearance	Grab sample
SW079	Drain	25/10/2021	8.82	217.2	7.33	304.2	22.5	-	No odour	No sheen	Grab sample
SW079	Drain	5/04/2022	4.39	308.9	6.89	324.4	21.9	-	No odour	No sheen	Grab sample
SW100	Warrill Creek	20/10/2022	7.19	674	7.38	225.2	26.3	-	No odour	No sheen	Grab sample
SW094	Bremer River	1/04/2022	6.37	163.6	7.21	163.1	25.2	-	No odour	No sheen	Grab sample
SW079	Drain	24/10/2022	5.95	262.3	6.51	242.5	21.2	-	No odour	No sheen	Grab sample
SW079	Drain	21/04/2023	0.87	826.3	8.07	278.7	17.8	-	Organic odour	No sheen	Grab sample
SW094	Bremer River	19/10/2022	4.9	494.8	7.13	195.5	20.5	-	No odour	No sheen	Grab sample
SW094	Bremer River	22/05/2023	6	1239	6.9	352.6	16.5	-	No odour	No sheen	Grab sample

TABLE A3: Surface Water Parameters

Location ID	Location	Sample Date	DO (mg/L)	EC (µS/cm)	pH	Eh/(mV)	Temp (°C)	Turbidity	Odour	Sheen	Sample Method/Comments
SW079	Drain	29/11/2023	3.27	145.3	6.79	349.6	28.9	Brown, moderately turbid	Organic odour	No sheen	Grab sample
SW100	Warrill Creek	19/04/2023	0.62	274.7	7.74	237.9	19.4	-	Organic odour	No sheen	Grab sample
SW094	Bremer River	24/10/2023	1.84	1958	7.85	276.1	24.4	Clear, slightly turbidity	Organic odour	Biosheen	Grab sample
SW094	Bremer River	11/04/2024	4.1	311.4	7.19	201.6	23.3	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW079	Drain	18/04/2024	2.16	361.6	6.94	161.1	21	Brown, highly turbid	Organic odour	Biosheen	Grab sample
SW080	Drain	21/04/2020	4.48	566	8.56	220.8	23.9	-	No odour	No sheen	Grab sample
SW098	Bremer River	14/04/2020	3.2	363.4	7.8	450.1	19	-	No odour	No sheen	Grab sample
SW098	Bremer River	8/10/2020	-	-	-	-	-	-	-	-	Grab sample, data loss
SW098	Bremer River	15/04/2021	3.34	238.8	7.92	262.8	20.1	-	No odour	No sheen	Grab sample
SW080	Drain	21/10/2020	3.75	371.4	7.78	234.6	20.1	-	No odour	No sheen	Grab sample
SW080	Drain	19/04/2021	4.67	646	7.76	354.3	24.3	-	No odour	Biosheen Appearance	Grab sample
SW080	Drain	25/10/2021	0.12	309.3	6.72	263.2	23	-	Sulfuric odour	Sheen	Grab sample
SW080	Drain	5/04/2022	0.3	464.7	6.84	125.6	23.3	-	No odour	No sheen	Grab sample
SW080	Drain	24/10/2022	5.9	149.6	6.3	141.1	20	-	No odour	No sheen	Grab sample
SW080	Drain	21/04/2023	0.96	492.7	6.99	277.3	20	-	Organic odour	No sheen	Grab sample
SW080	Drain	29/11/2023	4.16	243.9	7.06	315.7	28	Light brown, slightly turbid	No odour	No sheen	Grab sample
SW080	Drain	15/04/2024	3.05	568	7.68	162.1	23.5	Clear, modertate turbidity	No odour	No sheen	Grab sample
SW098	Bremer River	19/10/2021	3.37	804	7.14	333.8	20.6	-	No odour	No sheen	Grab sample
SW098	Bremer River	1/04/2022	5.42	405.1	7.62	272.9	22.3	-	No odour	No sheen	Grab sample
SW098	Bremer River	20/10/2022	6.67	294.7	7.95	212.6	20	-	No odour	No sheen	Grab sample
SW098	Bremer River	18/04/2023	0.97	969	7.27	244.5	20.5	-	Organic odour	No sheen	Grab sample
SW098	Bremer River	26/10/2023	2.63	636	7.44	285.8	23.7	Clear, slightly turbid	Organic odour	No sheen	Grab sample
SW098	Bremer River	12/04/2024	4.07	317.9	7.21	211.8	21.6	Brown, moderate turbidity	No odour	No sheen	Grab sample
SW100	Warrill Creek	24/10/2023	5.02	684	7.89	292	26.3	Clear light brown, non-turbid	Organic odour	No sheen	Grab sample
SW100	Warrill Creek	11/04/2024	4.32	358	7.36	205.2	22.5	Brown, low turbidity	No odour	No sheen	Grab sample

Notes

DO - Dissolved Oxygen

EC - Electrical Conductivity

Er - Uncorrected Oxidation Reduction Potential Eh - Corrected Oxidation Reduction Potential

' - no data

Er converted to Eh by adding 205 based on a YSI with Ag/AgCl sensor calibrated to a 3.5 molar KCL solution mg/L - milligrams per litre

µS/cm - microsiemens per centimetre mV - millivolts

°C - degrees Celsius

*Insufficient sample volume to collect water quality parameters

TABLE A4: Surface Water Analytical Summary

Project ID	Location Code	Field ID	Date	Lab Report Number	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorootadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
QLD_0861_PFAS	SW002	0861_SW002_190429	29 Apr 2019	EB1911387	0.06	0.06	0.55	<0.02	0.97	-	<0.02	0.3	2.56	2.25	0.75	0.34	0.11	0.09	<0.02	<0.02	<0.02	<0.05	<0.05	5.15	0.50	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.52	-	13.4	-	-	13.7	-
QLD_0861_PFAS	SW002	0861_SW002_190429	29 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW002	0861_SW002_200415	15 Apr 2020	EB2010666-AE	0.21	0.18	1.09	0.05	1.50	-	<0.02	<0.5	<1.28	0.98	0.44	0.24	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.63	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	2.59	-	5.09	-	-	5.37	-
QLD_0861_PFASOMP	SW002	0861_SW002_201103	03 Nov 2020	EB2028860	0.20	0.12	0.99	0.03	2.80	-	0.08	2.3	9.05	9.70	3.56	0.91	0.17	0.46	0.90	0.83	0.15	<0.05	<0.05	32.7	3.19	0.32	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	3.79	-	65.4	-	-	68.5	-
QLD_0861_PFASOMP	SW002	0861_SW002_210330	30 Mar 2021	EB2108857	0.17	0.16	1.13	0.05	1.53	-	<0.02	0.3	0.75	0.74	0.25	0.22	0.03	<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	<0.02	<0.05	2.66	-	5.28	-	-	5.52	-
QLD_0861_PFASOMP	SW002	0861_QC161_211025	25 Oct 2021	EB2130835	0.07	0.04	0.39	<0.02	0.64	-	<0.02	0.15	0.24	0.24	0.07	0.06	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	1.03	-	1.86	-	-	1.93	-
QLD_0861_PFASOMP	SW002	0861_QC261_211025	25 Oct 2021	RN1333717	0.055	0.039	0.35	0.01	0.6	<0.01	<0.01	0.15	0.21	0.17	0.064	0.048	0.017	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.044	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW002	0861_SW002_211025	25 Oct 2021	EB2130835	0.07	0.04	0.40	<0.02	0.66	-	<0.02	0.16	0.25	0.23	0.07	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	1.06	-	1.91	-	-	1.97	-
QLD_0861_PFASOMP	SW002	0861_SW002_220328	28 Mar 2022	EB2209950	0.10	0.08	0.61	0.03	1.02	-	<0.02	0.2	0.34	0.38	0.16	0.19	0.05	<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	1.63	-	3.08	-	-	3.24	-
QLD_0861_PFASOMP	SW002	0861_SW002_221021	21 Oct 2022	EB2231197	0.03	<0.02	0.19	<0.02	0.31	-	<0.02	<0.1	0.17	0.16	0.08	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	0.50	-	0.98	-	-	0.98	-
QLD_0861_PFASOMP_23	SW002	0861_SW002_230418	18 Apr 2023	EB2312062-AA	0.03	0.03	0.15	<0.02	0.33	-	<0.02	<0.1	0.17	0.12	0.05	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	0.48	-	0.88	-	-	0.91	-
QLD_0861_PFASOMP_23	SW002	0861_SW002_231027	27 Oct 2023	EB2333887-AA	0.03	0.02	0.19	<0.02	0.26	-	<0.02	0.1	0.46	0.34	0.17	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	0.45	-	1.60	-	-	1.62	-
QLD_0861_PFASOMP_24	SW002	0861_SW002_240410	10 Apr 2024	EB2413910	0.08	0.07	0.43	<0.02	0.76	-	<0.02	<0.1	0.18	0.21	0.07	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	1.19	-	1.79	-	-	1.86	-
QLD_0861_PFAS	SW003	0861_SW003_190429	29 Apr 2019	EB1911387	0.36	0.37	2.41	0.10	3.06	-	<0.02	0.2	0.61	1.02	0.24	0.32	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.43	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	5.47	-	8.65	-	-	9.15	-
QLD_0861_PFAS	SW003	0861_SW003_190429	29 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW003	0861_SW003_201103	03 Nov 2020	EB2028860	0.26	0.20	1.73	0.12	3.10	-	<0.02	0.4	0.66	0.77	0.25	0.28	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	1.36	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	4.83	-	8.81	-	-	9.17	-
QLD_0861_PFASOMP	SW003	0861_SW003_210330	30 Mar 2021	EB2108857	0.28	0.28	1.71	0.06	1.39	-	<0.02	0.3	0.76	0.90	0.21	0.19	<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	3.10	-	5.92	-	-	6.26	-
QLD_0861_PFASOMP	SW003	0861_SW003_211022	22 Oct 2021	EB2130835	0.10	0.08	0.58	0.03	0.85	-	<0.02	<0.1	0.16	0.24	0.04	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	1.43	-	2.03	-	-	2.14	-
QLD_0861_PFASOMP	SW003	0861_QC168_220328	28 Mar 2022	EB2209942	0.71	0.84	3.12	0.20	2.94	-	<0.02	0.4	1.00	1.69	0.46	0.41	0.03	<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	<0.05	<0.02	<0.05	6.06	-	10.9	-	-	12.0	-
QLD_0861_PFASOMP	SW003	0861_QC268_220328	28 Mar 2022	RN1349008	0.58	0.51	2.1	0.084	1.6	<0.01	0.014	0.34	0.81	1.3	0.3	0.34	0.024	<0.01	0.014	0.032	0.042	0.039	<0.01	0.12	<0.01	<0.01	0.014	<0.02	0.027	<0.05	<0.02	0.039	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW003	0861_SW003_220328	28 Mar 2022	EB2209950	0.86	0.76	3.75	0.17	3.20	-	<0.02	0.3	1.03	1.89	0.42	0.58	0.03	<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	6.95	-	12.2	-	-	13.2	-
QLD_0861_PFASOMP	SW003	0861_SW003_221021	21 Oct 2022	EB2231197	<0.02	<0.02	0.10	<0.02	0.33	-	<0.02	<0.1	0.06	0.06	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	0.43	-	0.60	-	-	0.60	-
QLD_0861_PFASOMP_23	SW003	0861_SW003_230418	18 Apr 2023	EB2312062-AA	0.16	0.13	0.84	0.05	1.47	-	<0.02	<0.1	0.20	0.33	0.08	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	2.31	-	3.18	-	-	3.36	-
QLD_0861_PFASOMP_23	SW003	0861_SW003_231129	29 Nov 2023	EB2337879-AA	0.11	0.06	0.33	<0.02	0.79	-	<0.02	<0.1	0.15	0.15	0.04	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	1.12	-	1.63	-	-	1.69	-
QLD_0861_PFASOMP_24	SW003	0861_SW003_240410	10 Apr 2024	EB2413910	0.05	0.04	0.30	<0.02	0.55	-	<0.02	<0.1	0.13	0.13	0.05	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	0.85	-	1.25	-	-	1.29	-
QLD_0861_PFAS	SW004	0861_SW04_170531	31 May 2017	EB1711233	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFAS	SW004	0861_SW004_190502	02 May 2019	EB1911387	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW004	0861_SW004_190502	02 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW004	0861_SW004_191118	18 Nov 2019	EB1931427	<0.02	<0.02	0.04	<0.02	0.07	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.11	-	0.11	-	-	0.11	-
QLD_0861_PFASOMP	SW004	0861_SW004_200414	14 Apr 2020	EB2010666-AE	<0.02	<0.02	0.03	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.08	-	0.08	-	-	0.08	-
QLD_0861_PFASOMP	SW004	0861_SW004_201012	12 Oct 2020	EB2027172	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW004	0861_SW004_210414	14 Apr 2021	EB2111121	<0.02	<0.02	0.04	<0.02	0.06	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.10	-	0.12	-	-	0.12	-
QLD_0861_PFASOMP	SW004	0861_SW004_211019	19 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP	SW004	0861_SW004_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.04	<0.02	0.10	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.14	-	0.14	-	-	0.14	-
QLD_0861_PFASOMP	SW004	0861_SW004_221018	18 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW004	0861_SW004_230428	28 Apr 2023	EB2312761-AA	<0.02	<0.02	0.02	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP_23	SW004	0861_SW004_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP_24	SW004	0861_SW004_240409	09 Apr 2024	EB2413910	<0.02	<0.02	0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFAS	SW005	0861_SW05_170531	31 May 2017	EB1711233	0.05	0.04	0.30	<0.02	1.34	-	<0.02	<0.1	<0.02	0.07	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.64	-	1.78	-	-	1.82	-
QLD_0861_PFAS	SW005	0861_SW005_190430	30 Apr 2019	EB1911387	0.22	0.21	1.74	0.06	3.02	-	<0.02	<0.1	0.12	0.36	0.04	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	4.76	-	5.57	-	-	5.84	-
QLD_0861_PFAS	SW005	0861_SW005_190430	30 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW005	0861_SW005_191118	18 Nov 2019	EB1931427	<0.02	<0.02	0.03	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.08	-	0.08	-	-	0.08	-
QLD_0861_PFASOMP	SW005	0861_SW005_200414	14 Apr 2020	EB2010666-AE	<0.02	<0.02	0.03	<0.02	0.07	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.10	-	0.10	-	-	0.10	-
QLD_0861_PFASOMP	SW005	0861_SW005_201012	12 Oct 2020	EB2027172	0.25	0.18	1.50	0.06	2.78	-	<0.02	<0.10	0.14	0.41	0.04	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	4.28	-	5.20	-	-	5.44	-
QLD_0861_PFASOMP	SW005	0861_SW005_210412	12 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP	SW005	0861_SW005_211019	19 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW005	0861_SW005_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.02	<0.02	0.10	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.12	-	0.12	-	-	0.12	-
QLD_0861_PFASOMP	SW005	0861_QC182_221018	18 Oct 2022	EB2231197	0.09	0.07	0.50	0.03	1.26	-	<0.02	<0.1	0.04	0.13	<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	1.76	-	2.05	-	-	2.15	-
QLD_0861_PFASOMP	SW005	0861_QC282_221018	18 Oct 2022	RN1370747	0.051	0.037	0.31	<0.01	0.65	<0.01	<0.01	<0.05	<0.02	0.061	<0.01	0.017	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW005	0861_SW005_221018	18 Oct 2022	EB2231197	0.09	0.07	0.51	0.03	1.23	-	<0.02	<0.1	0.04	0.13	<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	1.74	-	2.03	-	-	2.13	-
QLD_0861_PFASOMP_23	SW005	0861_SW005_230428	28 Apr 2023	EB2312761-AA	1.53	1.11	6.22	0.27	11.4	-	<0.02	0.5	0.53	1.41	0.13	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	17.6	-	22.0	-	-	23.4	-
QLD_0861_PFASOMP_23	SW005	0861_SW005_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	0.01	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP_24	SW005	0861_SW005_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW008	0861_SW08_170531	31 May 2017	EB1711233	0.35	0.30	1.72	0.09	1.75	-	0.13	<0.1	0.27	0.68	0.13	0.20	<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	3.47	-	5.21	-	-	5.73	-
QLD_0861_PFAS	SW008	0861_SW008_190502	02 May 2019	EB1911387	0.14	0.06	0.37	<0.02	0.37	-	<0.02	<0.1	0.07	0.16	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	0.74	-	1.17	-	-	1.23	-
QLD_0861_PFAS	SW008	0861_SW008_190502	02 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW008	0861_QC106_200417	17 Apr 2020	EB2010666-AE	0.12	0.09	0.51	0.03	1.00	-	<0.02	<0.1	0.16	0.24	0.05	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.20	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.51	-	2.36	-	-	2.48	-
QLD_0861_PFASOMP	SW008	0861_QC206_200417	17 Apr 2020	RN1271947	0.085	0.065	0.45	0.014	0.78	<0.01	<0.01	0.052	0.16	0.22	0.052	0.067	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.16	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW008	0861_QC206_200417	17 Apr 2020	RN1274650	0.085	0.065	0.45	0.014	0.78	<0.01	<0.01	0.052	0.16	0.22	0.052	0.067	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.16	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW008	0861_SW008_200417	17 Apr 2020	EB2010666-AE	0.10	0.09	0.43	0.02	0.92	-	<0.02	<0.1	<0.16	0.23	0.07	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.14	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.35	-	1.96	-	-	2.07	-
QLD_0861_PFASOMP	SW008	0861_SW008_201103	03 Nov 2020	EB2028860	0.08	0.06	0.37	<0.04	1.06	-	<0.04	<0.3	0.07	0.12	0.05	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	<0.09	<0.05	0.06	<0.05	<0.05	<0.04	<0.09	<0.04	<0.09	<0.09	<0.04	<0.09	1.43	-	1.87	-	-	1.93	-
QLD_0861_PFASOMP	SW008	0861_SW008_210415	15 Apr 2021	EB2111121	0.04	0.03	0.16	<0.02	0.37	-	<0.02	<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	0.53	-	0.64	-	-	0.67	-
QLD_0861_PFASOMP	SW008	0861_SW008_211026	26 Oct 2021	EB2130850	0.08	0.03	0.26	<0.02	0.41	-	<0.02	<0.10	<0.04	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	0.67	-	0.80	-	-	0.83	-
QLD_0861_PFASOMP	SW008	0861_SW008_220328	28 Mar 2022	EB2209950	0.03	<0.02	0.12	<0.02	0.22	-	<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	0.34	-	0.43	-	-	0.43	-
QLD_0861_PFASOMP	SW008	0861_SW008_221026	26 Oct 2022	EB2231825	<0.05	<0.05	<0.05	<0.05	0.07	-	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.13	<0.05	<0.13	<0.13	<0.05	<0.13	0.07	-	0.07	-	-	0.07	-
QLD_0861_PFASOMP_23	SW008	0861_SW008_230427	27 Apr 2023	EB2312761-AA	0.14	0.08	0.51	0.03	0.93	-	<0.02	<0.1	0.13	0.23	0.04	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	1.44	-	2.10	-	-	2.21	-
QLD_0861_PFASOMP_23	SW008	0861_SW008_231025	25 Oct 2023	EB2333887-AA	0.06	0.04	0.23	<0.02	0.39	-	<0.02	<0.1	0.05	0.08	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.62	-	0.85	-	-	0.89	-
QLD_0861_PFASOMP_24	SW008	0861_SW008_240412	12 Apr 2024	EB2413910	<0.34	0.23	1.63	0.08	2.56	-	<0.02	0.1	0.34	0.58	0.12	0.18	<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	4.19	-	5.59	-	-	5.90	-
QLD_0861_PFAS	SW009	0861_SW09_170531	31 May 2017	EB1711233	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW009	0861_SW009_190502	02 May 2019	EB1911387	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW009	0861_SW009_190502	02 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW009	0861_SW009_191121	21 Nov 2019	EB1931427	<0.02	0.02	0.13	<0.02	0.32	-	<0.02	<0.1	0.02	0.07	<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	0.45	-	0.57	-	-	0.59	-
QLD_0861_PFASOMP	SW009	0861_SW009_200415	15 Apr 2020	EB2010666-AE	<0.02	<0.02	0.07	<0.02	0.11	-	<0.02	<0.1	<0.04	0.04	<0.02	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	0.18	-	0.23	-	-	0.23	-
QLD_0861_PFASOMP	SW009	0861_SW009_201012	12 Oct 2020	EB2027172	0.04	<0.02	0.03	<0.02	0.04	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.07	-	0.11	-	-	0.11	-
QLD_0861_PFASOMP	SW009	0861_SW009_210414	14 Apr 2021	EB2111121	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP	SW009	0861_SW009_211022	22 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW009	0861_SW009_220329	29 Mar 2022	EB2209950	0.14	0.10	0.75	0.03	1.05	-	<0.02	<0.1	0.12	0.24	0.05	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	1.80	-	2.43	-	-	2.56	-
QLD_0861_PFASOMP	SW009	0861_SW009_221018	18 Oct 2022	EB2231197	0.14	0.12	0.71	0.03	0.66	-	<0.02	<0.1	0.12	0.36	0.06	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	1.37	-	2.13	-	-	2.28	-
QLD_0861_PFASOMP_23	SW009	0861_SW009_230428	28 Apr 2023	EB2312761-AA	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP_23	SW009	0861_SW009_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP_24	SW009	0861_SW009_240412	12 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFAS	SW011	0861_SW011_SW_170912	13 Sep 2017	EB1718855	1.76	1.92	13.0	0.585	23.3	-	<0.002	0.36	3.10	5.39	1.16	1.05	0.062	0.012	<0.002	<0.002	<0.002	<0.005	<0.005	5.39	0.068	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	36.3	-	33.2	-	-	57.2	-
QLD_0861_PFAS	SW011	0861_SW011_170915	15 Sep 2017	EB1719132	0.19	0.16	1.18	0.04	2.01	-	<0.02	<0.1	<0.02	0.33	0.04	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	3.19	-	3.83	-	-	4.03	-
QLD_0861_PFAS	SW011	0861_SW011_190501	01 May 2019	EB1911387	0.22	0.26	2.17	0.09	2.26	-	<0.02	0.4	0.92	1.10	0.40	0.26	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	2.09	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	4.43	-	9.82	-	-	10.2	-
QLD_0861_PFAS	SW011	0861_SW011_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW011	0861_SW011_200414	14 Apr 2020	EB2010666-AE	0.03	0.02	0.25	<0.02	0.40	-	<0.02	<0.1	0.02	0.05	<0.02	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	0.65	-	0.76	-	-	0.78	-
QLD_0861_PFASOMP	SW011	0861_SW011_201103	03 Nov 2020	EB2028860	0.16	0.12	1.35	0.08	1.91	-	<0.02	<0.3	0.35	0.43	0.12	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.20	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	3.26	-	4.64	-	-	4.84	-
QLD_0861_PFASOMP	SW011	0861_SW011_210330	30 Mar 2021	EB2108857	0.37	0.42	4.44	0.19	5.28	-	<0.02	0.4	1.06	1.39	0.36	0.36	0.05	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	3.33	0.10	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	9.72	-	17.1	-	-	17.8	-
QLD_0861_PFASOMP	SW011	0861_SW011_211026	26 Oct 2021	EB2130850	0.18	0.16	1.72	0.09	2.15	-	<0.02	0.1	0.17	0.38	0.06	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	3.87	-	4.87	-	-	5.12	-
QLD_0861_PFASOMP	SW011	0861_SW011_220328	28 Mar 2022	EB2209950	0.13	0.12	0.99	0.06	1.49	-	<0.02	<0.1	0.29	0.39	0.12	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	1.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	2.48	-	4.60	-	-	4.78	-
QLD_0861_PFASOMP_23	SW011	0861_SW011_230417	17 Apr 2023	EB2312062-AA	0.28	0.31	3.15	0.16	6.57	-	<0.02	0.1	0.21	0.62	0.10	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	9.72	-	11.2	-	-	11.7	-
QLD_0861_PFASOMP_23	SW011	0861_SW011_231024	24 Oct 2023	EB2333887-AA	0.06	0.05	0.50	0.03	0.89	-	<0.02	<0.1	0.04	0.07	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.39	-	1.60	-	-	1.68	-
QLD_0861_PFASOMP_24	SW011	0861_SW011_240409	09 Apr 2024	EB2413910	0.14	0.15	1.60	0.07	2.44	-	<0.02	<0.1	0.12	0.35	0.05	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	4.04	-	4.78	-	-	5.00	-
QLD_0861_PFAS	SW015	0861_SW15_170605	05 Jun 2017	EB1711471	<0.02	<0.02	0.03	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFAS	SW015	0861_SW015_190430	30 Apr 2019	EB1911387	<0.02	<0.02	0.02	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFAS	SW015	0861_SW015_190430	30 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW015	0861_SW015_191118	18 Nov 2019	EB1931427	<0.02	<0.02	0.03	<0.02	0.06	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.09	-	0.09	-	-	0.09	-
QLD_0861_PFASOMP	SW015	0861_SW015_200414	14 Apr 2020	EB2010666-AE	<0.02	<0.02	0.03	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.08	-	0.08	-	-	0.08	-
QLD_0861_PFASOMP	SW015	0861_SW015_201012	12 Oct 2020	EB2027172	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW015	0861_SW015_210412	12 Apr 2021	EB2111121	<0.02	<0.02	0.02	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP	SW015	0861_SW015_211019	19 Oct 2021	EB2130835	<0.02	<0.02	0.01	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-

TABLE A4: Surface Water Analytical Summary

					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
Project ID	Location Code	Field ID	Date	Lab Report Number	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorooctadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
QLD_0861_PFASOMP	SW015	0861_SW015_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.02	<0.02	0.07	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.09	-	0.09	-	-	0.09	-
QLD_0861_PFASOMP	SW015	0861_SW015_221018	18 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW015	0861_SW015_230426	26 Apr 2023	EB2312761-AA	<0.02	<0.02	0.01	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP_23	SW015	0861_SW015_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	0.02	<0.02	0.05	-	<0.02	<0.2	<0.02	<0.02	<0.02	<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	0.07	-	0.07	-	-	0.07	-
QLD_0861_PFASOMP_24	SW015	0861_SW015_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW016	0861_SW16_170605	05 Jun 2017	EB1711471	0.15	0.10	0.78	0.05	2.60	-	<0.02	<0.1	<0.02	0.17	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	3.38	-	3.77	-	-	3.92	-
QLD_0861_PFAS	SW016	0861_SW016_190430	30 Apr 2019	EB1911387	<0.02	<0.02	0.03	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFAS	SW016	0861_SW016_190430	30 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW016	0861_SW016_191118	18 Nov 2019	EB1931427	<0.02	<0.02	0.03	<0.02	0.06	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.09	-	0.09	-	-	0.09	-
QLD_0861_PFASOMP	SW016	0861_SW016_200414	14 Apr 2020	EB2010666-AE	<0.02	<0.02	<0.02	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP	SW016	0861_SW016_201012	12 Oct 2020	EB2027172	<0.02	<0.02	<0.02	<0.02	0.06	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP	SW016	0861_QC141_210412	12 Apr 2021	EB2111121	<0.02	<0.02	0.02	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP	SW016	0861_QC241_210412	12 Apr 2021	RN1313031	<0.01	<0.01	0.017	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW016	0861_SW016_210412	12 Apr 2021	EB2111121	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP	SW016	0861_SW016_211019	19 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW016	0861_SW016_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.02	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.07	-	0.07	-	-	0.07	-
QLD_0861_PFASOMP	SW016	0861_SW016_221018	18 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP_23	SW016	0861_SW016_230428	28 Apr 2023	EB2312761-AA	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP_23	SW016	0861_SW016_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP_24	SW016	0861_SW016_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW018	0861_SW18_170601	01 Jun 2017	EB1711387	<0.02	<0.02	0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFAS	SW018	0861_SW018_190430	30 Apr 2019	EB1911387	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFAS	SW018	0861_SW018_190430	30 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW018	0861_SW018_191119	19 Nov 2019	EB1931427	0.04	<0.02	0.10	<0.02	0.12	-	<0.02	<0.1	<0.02	0.05	<0.02	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	0.22	-	0.32	-	-	0.32	-
QLD_0861_PFASOMP	SW018	0861_SW018_200414	14 Apr 2020	EB2010666-AE	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP	SW018	0861_SW018_201012	12 Oct 2020	EB2027172	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP	SW018	0861_SW018_210412	12 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW018	0861_SW018_211019	19 Oct 2021	EB2130835	<0.02	<0.02	0.01	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFASOMP	SW018	0861_SW018_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.05	<0.02	0.07	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.12	-	0.12	-	-	0.12	-
QLD_0861_PFASOMP	SW018	0861_SW018_221018	18 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW018	0861_SW018_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP_24	SW018	0861_SW018_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFAS	SW020	0861_SW20_170601	01 Jun 2017	EB1711387	<0.02	<0.02	0.03	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFAS	SW020	0861_SW020_190430	30 Apr 2019	EB1911387	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFAS	SW020	0861_SW020_190430	30 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW020	0861_SW020_191119	19 Nov 2019	EB1931427	0.04	<0.02	0.09	<0.02	0.11	-	<0.02	<0.1	<0.02	0.05	<0.02	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	0.20	-	0.30	-	-	0.30	-
QLD_0861_PFAS	SW020	0861_SW020_191120	20 Nov 2019	EB1931427	0.03	<0.02	0.09	<0.02	0.14	-	<0.02	<0.1	<0.02	0.05	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.23	-	0.33	-	-	0.33	-
QLD_0861_PFASOMP	SW020	0861_SW020_200415	14 Apr 2020	EB2010666-AE	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP	SW020	0861_QC119_201012	12 Oct 2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP	SW020	0861_QC219_201012	12 Oct 2020	RN1292028	<0.01	<0.01	0.018	<0.01	0.034	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW020	0861_SW020_201012	12 Oct 2020	EB2027172	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP	SW020	0861_SW020_210412	12 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW020	0861_SW020_211019	19 Oct 2021	EB2130835	<0.02	<0.02	0.01	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP	SW020	0861_SW020_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.04	<0.02	0.07	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.11	-	0.11	-	-	0.11	-
QLD_0861_PFASOMP	SW020	0861_QC185_221018	18 Oct 2022	EB2231197	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW020	0861_QC285_221018	18 Oct 2022	RN1370747	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW020	0861_SW020_221018	18 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW020	0861_SW020_230428	28 Apr 2023	EB2312761-AA	<0.02	<0.02	0.03	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.08	-	0.08	-	-	0.08	-
QLD_0861_PFASOMP_23	SW020	0861_SW020_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFASOMP_24	SW020	0861_QC101_240409	09 Apr 2024	EB2413950	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP_24	SW020	0861_QC201_240409	09 Apr 2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	SW020	0861_SW020_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW021	0861_SW021_170914	14 Sep 2017	EB1719065	0.83	0.95	6.98	0.42	17.9	-	0.12	1.0	2.41	5.52	0.97	1.49	0.13	0.06	0.05	<0.02	<0.02	<0.05	<0.05	<0.05	0.11	<0.05	0.05	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	24.9	-	37.2	-	-	39.0	-
QLD_0861_PFASOMP	SW021	0861_SW021_200420	20 Apr 2020	EB2011246-AC	0.39	0.47	4.98	0.35	23.1	-	0.58	<0.3	0.44	1.02	0.23	0.75	0.11	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.16	<0.16	<0.06	<0.16	28.1	-	30.9	-	-	32.4	-
QLD_0861_PFASOMP	SW021	0861_QC135_201103	03 Nov 2020	EB2028860	1.72	2.03	16.6	1.32	38.2	-	0.23	2.3	2.76	4.95	0.84	2.18	0.29	0.05	0.03	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	54.8	-	69.6	-	-	73.6	-
QLD_0861_PFASOMP	SW021	0861_SW021_201103	03 Nov 2020	EB2028860	1.76	2.05	17.9	1.05	40.9	-	<0.10	1.7	3.19	5.27	0.96	2.35	0.27	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	58.8	-	74.0	-	-	77.4	-
QLD_0861_PFASOMP	SW021	0861_SW021_210330	30 Mar 2021	EB2108857	5.85	5.28	23.0	0.73	16.4	-	0.05	2.8	5.89	18.5	2.65	3.25	0.08	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.10	<0.05	<0.05	0.03	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	39.4	-	78.4	-	-	84.6	-
QLD_0861_PFASOMP	SW021	0861_SW021_211021	21 Oct 2021	EB2130835	1.01	0.74	5.20	0.26	9.50	-	0.31	0.7	1.40	2.77	0.41	0.80	0.05	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	14.7	-	21.8	-	-	23.2	-
QLD_0861_PFASOMP	SW021	0861_SW021_220331	31 Mar 2022	EB2209950	1.35	1.35	8.60	0.37	13.3	-	<0.05	0.7	1.74	4.58	0.74	1.60	0.05	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	0.03	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	21.9	-	32.6	-	-	34.4	-
QLD_0861_PFASOMP	SW021	0861_SW021_221021	21 Oct 2022	EB2231197	1.08	1.39	9.98	0.56	14.6	-	0.08	0.9	1.78	4.66	0.67	1.94	0.10	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	24.6	-	35.6	-	-	37.7	-
QLD_0861_PFASOMP_23	SW021	0861_SW021_230426	26 Apr 2023	EB2312761-AA	1.96	1.74	8.68	0.38	12.0	-	<0.02	1.4	1.87	3.07	0.49	0.82	0.09	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	20.7	-	30.3	-	-	32.5	-
QLD_0861_PFASOMP_23	SW021	0861_SW021_231129	29 Nov 2023	EB2337879-AA	0.73	0.49	2.74	0.13	5.52	-	<0.04	0.3	0.79	1.01	0.19	0.42	0.05	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	8.26	-	11.7	-	-	12.4	-
QLD_0861_PFASOMP_24	SW021	0861_SW021_240410	10 Apr 2024	EB2413910	0.22	0.24	2.02	0.10	6.06	-	<0.02	0.2	0.28	0.58	0.11	0.28	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	8.08	-	9.75	-	-	10.2	-
QLD_0861_PFAS	SW025	0861_SW25_170601	01 Jun 2017	EB1711387	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW025	0861_SW025_190507	07 May 2019	EB1911952	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.10	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	0.10	-	-	0.10	-
QLD_0861_PFAS	SW025	0861_SW025_190507	07 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW025	0861_QC101_191119	19 Nov 2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW025	0861_SW025_191119	19 Nov 2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW025	0861_QC201_191119	20 Nov 2019	231783	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	-	-	-	-	<0.01	-
QLD_0861_PFAS	SW025	0861_SW25_191128	29 Nov 2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_QC102_200415	15 Apr 2020	EB2010666-AF	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_QC202_200415	15 Apr 2020	RN1271947	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW025	0861_QC202_200415	15 Apr 2020	RN1274650	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW025	0861_SW025_200415	15 Apr 2020	EB2010666-AF	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_SW025_201014	14 Oct 2020	EB2027208-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.20	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_QC151_210421	21 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_QC251_210421	21 Apr 2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW025	0861_SW025_210421	21 Apr 2021	EB2111112	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_SW025_211022	22 Oct 2021	EB2130815	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_SW025_220328	28 Mar 2022	EB2209946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW025	0861_SW025_221020	20 Oct 2022	EB2231202	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW025	0861_SW025_230426	26 Apr 2023	EB2312761-AB	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW025	0861_SW025_231026	26 Oct 2023	EB2333898	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.2	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW025	0861_QC105_240412	12 Apr 2024	EB2413950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW025	0861_QC205_240412	12 Apr 2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	SW025	0861_SW025_240412	12 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW026	0861_SW26_170602	02 Jun 2017	EB1711373	<0.02	<0.02	0.10	<0.02	0.10	-	<0.02	<0.1	<0.02	0.03	<0.02	<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	0.20	-	0.23	-	-	0.23	-
QLD_0861_PFAS	SW026	0861_SW026_190507	07 May 2019	EB1911952	<0.02	<0.02	0.05	<0.02	0.06	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.11	-	0.11	-	-	0.11	-
QLD_0861_PFAS	SW026	0861_SW026_190507	07 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW026	0861_QC101_191127	27 Nov 2019	EB1932183	0.02	<0.02	0.06	<0.02	0.12	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.18	-	0.20	-	-	0.20	-
QLD_0861_PFAS	SW026	0861_QC201_191127	27 Nov 2019	232094	<0.01	<0.01	0.07	<0.01	0.13	-	<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	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	0.20	-	-	-	-	0.22	-
QLD_0861_PFAS	SW026	0861_SW026_191127	27 Nov 2019	EB1932183	0.02	<0.02	0.06	<0.02	0.12	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.18	-	0.20	-	-	0.20	-
QLD_0861_PFASOMP	SW026	0861_SW026_200421	21 Apr 2020	EB2011255	<0.02	<0.02	0.09	<0.02	0.14	-	<0.02	<0.1	<0.02	0.03	<0.02	<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	0.23	-	0.26	-	-	0.26	-
QLD_0861_PFASOMP	SW026	0861_SW026_201015	15 Oct 2020	EB2027208-AA	<0.02	<0.02	0.04	<0.02	0.07	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.11	-	0.11	-	-	0.11	-
QLD_0861_PFASOMP	SW026	0861_SW026_210416	16 Apr 2021	EB2111112	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP	SW026	0861_SW026_211020	20 Oct 2021	EB2130815	<0.02	<0.02	0.02	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.07	-	0.07	-	-	0.07	-
QLD_0861_PFASOMP	SW026	0861_SW026_220401	01 Apr 2022	EB2209946	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW026	0861_SW026_221020	20 Oct 2022	EB2231202	0.03	0.03	0.23	<0.02	0.35	-	<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	0.58	-	0.69	-	-	0.72	-
QLD_0861_PFASOMP_23	SW026	0861_SW026_230419	19 Apr 2023	EB2312057	<0.02	<0.02	0.04	<0.02	0.09	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.13	-	0.13	-	-	0.13	-
QLD_0861_PFASOMP_23	SW026	0861_SW026_231024	24 Oct 2023	EB2333898	<0.02	<0.02	0.07	<0.02	0.22	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.29	-	0.29	-	-	0.29	-
QLD_0861_PFASOMP_24	SW026	0861_QC103_240411	11 Apr 2024	EB2413950	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-

TABLE A4: Surface Water Analytical Summary

					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorooctadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
Project ID	Location Code	Field ID	Date	Lab Report Number																																				
QLD_0861_PFASOMP_24	SW026	0861_QC203_240411	11 Apr 2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	SW026	0861_SW026_240411	11 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP	SW027	0861_SW027_210330	30 Mar 2021	EB2108857	0.26	0.29	2.18	0.08	1.21	-	<0.02	0.2	0.38	0.64	0.16	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	3.39	-	5.20	-	-	5.57	-
QLD_0861_PFASOMP	SW027	0861_SW027_211026	26 Oct 2021	EB2130850	0.06	0.06	0.44	0.02	0.55	-	<0.02	<0.1	0.10	0.15	0.05	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	0.99	-	1.40	-	-	1.48	-
QLD_0861_PFASOMP	SW027	0861_SW027_220328	28 Mar 2022	EB2209950	1.87	2.32	21.5	1.11	14.0	-	<0.02	0.4	0.95	4.98	0.48	1.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	35.5	-	45.4	-	-	48.8	-
QLD_0861_PFASOMP	SW027	0861_SW027_221021	21 Oct 2022	EB2231197	<0.02	<0.02	0.08	<0.02	0.16	-	<0.02	<0.1	<0.02	0.04	<0.02	<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	0.24	-	0.28	-	-	0.28	-
QLD_0861_PFASOMP_23	SW027	0861_SW027_230417	17 Apr 2023	EB2312062-AA	0.03	0.03	0.26	<0.02	0.77	-	<0.02	<0.1	0.02	0.07	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.03	-	1.17	-	-	1.20	-
QLD_0861_PFASOMP_23	SW027	0861_SW027_231129	29 Nov 2023	EB2337879-AA	0.07	0.07	0.63	0.03	0.89	-	<0.02	<0.1	0.05	0.11	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	1.52	-	1.83	-	-	1.93	-
QLD_0861_PFASOMP_24	SW027	0861_SW027_240409	09 Apr 2024	EB2413910	0.17	0.20	1.92	0.10	4.88	-	<0.02	<0.1	0.12	0.34	0.07	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	6.80	-	7.60	-	-	7.90	-
QLD_0861_PFAS	SW028	0861_SW28_170601	01 Jun 2017	EB1711387	0.02	<0.02	0.13	<0.02	0.32	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.45	-	0.49	-	-	0.49	-
QLD_0861_PFAS	SW028	0861_SW028_190502	02 May 2019	EB1911387	<0.02	<0.02	0.12	<0.02	0.18	-	<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	0.30	-	0.32	-	-	0.32	-
QLD_0861_PFAS	SW028	0861_SW028_190502	02 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW028	0861_QC100_200414	14 Apr 2020	EB2010666-AE	0.14	0.06	0.64	0.02	0.75	-	<0.02	<0.10	0.03	0.05	<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	1.39	-	1.64	-	-	1.72	-
QLD_0861_PFASOMP	SW028	0861_QC200_200414	14 Apr 2020	RN1271947	0.11	0.061	0.61	0.011	0.63	<0.01	<0.01	0.061	0.027	0.055	<0.01	0.018	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW028	0861_QC200_200414	14 Apr 2020	RN1274650	0.11	0.061	0.61	0.011	0.63	<0.01	<0.01	0.061	0.027	0.055	<0.01	0.018	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW028	0861_SW028_200414	14 Apr 2020	EB2010666-AE	0.12	0.06	0.81	0.02	0.76	-	<0.02	<0.10	<0.02	0.14	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.57	-	1.85	-	-	1.93	-
QLD_0861_PFASOMP	SW028	0861_SW028_201103	03 Nov 2020	EB2028860	0.07	0.03	0.29	<0.02	0.44	-	<0.02	<0.2	<0.02	0.05	<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	0.73	-	0.89	-	-	0.92	-
QLD_0861_PFASOMP	SW028	0861_SW028_210412	12 Apr 2021	EB2111121	0.07	0.04	0.31	<0.02	0.45	-	<0.02	<0.1	0.03	0.04	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.48	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.76	-	1.39	-	-	1.43	-
QLD_0861_PFASOMP	SW028	0861_QC153_211019	19 Oct 2021	EB2130835	0.05	0.02	0.25	<0.02	0.57	-	<0.02	<0.1	0.02	0.04	<0.02	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	0.82	-	0.94	-	-	0.96	-
QLD_0861_PFASOMP	SW028	0861_QC253_211019	19 Oct 2021	RN1333717	0.048	0.028	0.24	<0.01	0.55	<0.01	<0.01	0.052	0.022	0.033	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW028	0861_SW028_211019	19 Oct 2021	EB2130835	0.06	0.02	0.27	<0.02	0.71	-	<0.02	<0.1	0.02	0.04	<0.02	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	0.98	-	1.11	-	-	1.13	-
QLD_0861_PFASOMP	SW028	0861_SW028_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.04	<0.02	0.08	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.12	-	0.12	-	-	0.12	-
QLD_0861_PFASOMP_23	SW028	0861_SW028_230509	09 May 2023	EB2314270	0.03	<0.02	0.13	<0.02	0.30	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.43	-	0.46	-	-	0.46	-
QLD_0861_PFASOMP_23	SW028	0861_SW028_231025	25 Oct 2023	EB2333887-AA	0.81	0.33	1.28	0.03	0.94	-	<0.02	<0.1	0.06	0.20	<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	2.22	-	3.34	-	-	3.70	-
QLD_0861_PFASOMP_24	SW028	0861_QC100_240409	09 Apr 2024	EB2413950	<0.02	<0.02	0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFASOMP_24	SW028	0861_QC200_240409	09 Apr 2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	SW028	0861_SW028_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFAS	SW030	0861_SW030_1904029	29 Apr 2019	EB1911387	0.21	0.21	2.01	0.08	1.44	-	<0.02	0.1	0.48	0.63	0.18	0.14	<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	3.45	-	5.30	-	-	5.59	-
QLD_0861_PFAS	SW030	0861_SW030_1904029	29 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW030	0861_SW030_201103	03 Nov 2020	EB2028860	0.09	0.07	0.66	0.02	0.61	-	<0.02	0.2	0.16	0.20	0.04	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	1.27	-	2.00	-	-	2.09	-
QLD_0861_PFASOMP	SW030	0861_SW030_210330	30 Mar 2021	EB2108857	0.47	0.52	5.18	0.23	4.46	-	<0.02	0.4	1.17	1.67	0.38	0.36	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	1.99	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	9.64	-	16.1	-	-	16.9	-
QLD_0861_PFASOMP	SW030	0861_SW030_211026	26 Oct 2021	EB2130850	1.18	0.81	6.06	0.34	7.68	-	<0.02	0.77	1.69	2.91	0.50	0.59	0.04	0.02	<0.02	0.04	<0.02	<0.05	<0.05	0.72	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	13.7	-	22.1	-	-	23.4	-
QLD_0861_PFASOMP	SW030	0861_SW030_220328	28 Mar 2022	EB2209950	0.18	0.14	1.00	0.06	2.29	-	<0.02	<0.1	0.12	0.29	0.06	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.14	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	3.29	-	4.17	-	-	4.37	-
QLD_0861_PFASOMP	SW030	0861_SW030_221021	21 Oct 2022	EB2231197	0.51	0.59	4.74	0.32	5.00	-	<0.02	0.2	0.44	1.27	0.24	0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.69	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	9.74	-	13.4	-	-	14.3	-
QLD_0861_PFASOMP_23	SW030	0861_SW030_230417	17 Apr 2023	EB2312062-AA	0.16	0.16	1.35	0.09	2.52	-	<0.02	0.1	0.31	0.43	0.11	0.13	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.37	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	3.87	-	5.48	-	-	5.75	-
QLD_0861_PFASOMP_23	SW030	0861_SW030_231024	24 Oct 2023	EB2333887-AA	0.12	0.09	0.64	0.04	2.31	-	<0.02	0.1	0.20	0.18	0.09	0.09	<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	2.95	-	3.80	-	-	3.93	-
QLD_0861_PFASOMP_24	SW030	0861_SW030_240409	09 Apr 2024	EB2413910	0.25	0.24	2.26	0.11	3.26	-	<0.02	0.1	0.31	0.54	0.11	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.39	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	5.52	-	7.36	-	-	7.71	-
QLD_0861_PFAS	SW033	0861_SW033_170914	14 Sep 2017	EB1719065	0.35	0.33	1.92	0.17	9.54	-	0.13	0.6	1.34	3.24	0.47	0.75	0.05	0.04	0.06	0.03	<0.02	<0.05	<0.05	<0.05	0.26	<0.05	0.08	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	11.5	-	18.5	-	-	19.4	-
QLD_0861_PFAS	SW033	0861_SW033_190503	03 May 2019	EB1911387	0.62	0.67	4.53	0.26	9.23	-	<0.02	1.0	2.01	4.27	0.84	1.38	0.18	0.10	0.04	<0.02	<0.02	<0.05	<0.05	0.07	0.46	<0.05	0.19	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	13.8	-	24.4	-	-	25.8	-
QLD_0861_PFAS	SW033	0861_SW033_190503	03 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW033	0861_SW033_200427	27 Apr 2020	EB2011562	0.07	0.12	1.01	0.08	3.50	-	0.04	<0.1	0.14	0.38	0.08	0.20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	4.51	-	5.38	-	-	5.70	-
QLD_0861_PFASOMP	SW033	0861_SW033_210415	15 Apr 2021	EB2111121	6.82	8.00	44.2	1.52	63.8	-	0.66	3.2	6.11	23.3	3.35	7.70	0.16	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	0.14	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	108	-	158	-	-	169	-
QLD_0861_PFASOMP	SW033	0861_SW033_211026	26 Oct 2021	EB2130850	2.54	2.94	22.1	0.89	78.6	-	0.47	1.96	3.05	8.49	0.94	2.70	0.08	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	101	-	120	-	-	125	-
QLD_0861_PFASOMP	SW033	0861_SW033_220405	05 Apr 2022	EB2209950	3.38	4.96	28.6	0.87	31.4	-	0.67	<1.7	3.17	12.5	1.88	4.52	0.08	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	0.24	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	60.0	-	85.4	-	-	92.3	-
QLD_0861_PFASOMP	SW033	0861_QC195_221025	25 Oct 2022	EB2231825	0.63	0.81	5.61	0.30	17.5	-	0.27	0.7	0.89	2.65	0.38	0.93	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	23.1	-	29.3	-	-	30.9	-
QLD_0861_PFASOMP	SW033	0861_QC295_221025	25 Oct 2022	RN1371573	0.46	0.53	3.4	0.16	10	0.043	0.032	0.47	0.63	1.4	0.2	0.5	0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	0.084	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW033	0861_SW033_221025	25 Oct 2022	EB2231825	0.60	0.74	5.27	0.27	17.1	-	0.26	0.7	0.85	2.58	0.37	0.88	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	22.4	-	28.4	-	-	29.8	-
QLD_0861_PFASOMP_23	SW033	0861_SW033_231129	29 Nov 2023	EB2337879-AA	1.54	0.99	4.90	0.17	8.13	-	<0.06	0.6	1.23	1.90	0.25	0.63	<0.04	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	0.03	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	13.0	-	19.2	-	-	20.4	-
QLD_0861_PFAS	SW034	0861_SW34_170601	01 Jun 2017	EB1711387	0.83	0.87	5.91	0.24	6.08	-	<0.02	<0.1	0.48	1.02	0.10	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	12.0	-	14.6	-	-	15.7	-
QLD_0861_PFAS	SW034	0861_SW034_190430	30 Apr 2019	EB1911387	<0.02	<0.02	<0.02	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFAS	SW034	0861_SW034_190430	30 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW034	0861_SW034_191119	19 Nov 2019	EB1931427	0.04	<0.02	0.11	<0.02	0.14	-	<0.02	<0.1	<0.02	0.05	<0.02	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	0.25	-	0.35	-	-	0.35	-
QLD_0861_PFASOMP	SW034	0861_SW034_200414	14 Apr 2020	EB2010666-AE	<0.02	<0.02	0.02	<0.02	0.06	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.08	-	0.08	-	-	0.08	-
QLD_0861_PFASOMP	SW034	0861_SW034_201012	12 Oct 2020	EB2027172	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP	SW034	0861_SW034_210412	12 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.20	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.02	-	0.22	-	-	0.22	-
QLD_0861_PFASOMP	SW034	0861_SW034_211019	19 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW034	0861_SW034_220329	29 Mar 2022	EB2209950	<0.02	<0.02	0.05	<0.02	0.08	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.13	-	0.13	-	-	0.13	-
QLD_0861_PFASOMP	SW034	0861_SW034_221018	18 Oct 2022	EB2231197	0.02	0.02	0.20	<0.02	0.30	-	<0.02	<0.1	<0.02	0.04	<0.02	<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	0.50	-	0.56	-	-	0.58	-
QLD_0861_PFASOMP_23	SW034	0861_SW034_230428	28 Apr 2023	EB2312761-AA	<0.02	<0.02	0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.06	-	0.06	-	-	0.06	-
QLD_0861_PFASOMP_23	SW034	0861_SW034_231025	25 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.02	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP_24	SW034	0861_SW034_240409	09 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW036	0861_SW36_170530	30 May 2017	ES1713428	0.038	0.024	0.111	0.007	0.119	-	<0.002	<0.01	0.013	0.039	0.008	0.010	<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	0.230	-	0.243	-	-	0.369	-
QLD_0861_PFAS	SW036	0861_SW036_180119	18 Jan 2018	EB1802500	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW036	0861_SW036_190501	01 May 2019	EB1911387	<0.02	<0.02	<0.02	<0.02	0.03	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFAS	SW036	0861_SW036_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW036	0861_SW036_200415	15 Apr 2020	EB2010666-AE	0.02	<0.02	0.19	<0.02	0.15	-	<0.02	<0.10	<0.02	0.08	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.34	-	0.48	-	-	0.48	-
QLD_0861_PFASOMP	SW036	0861_SW036_201014	14 Oct 2020	EB2027176-AA	<0.02	<0.02	0.03	<0.02	0.08	-	<0.02	<0.10	0.05	0.03	0.03	<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	0.11	-	0.22	-	-	0.22	-
QLD_0861_PFASOMP	SW036	0861_QC142_210414	14 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW036	0861_QC242_210414	14 Apr 2021	RN1313031	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW036	0861_SW036_210414	14 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP	SW036	0861_QC155_211020	20 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW036	0861_QC255_211020	20 Oct 2021	RN1333717	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW036	0861_SW036_211020	20 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW036	0861_QC178_220401	01 Apr 2022	EB2209942	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW036	0861_QC278_220401	01 Apr 2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW036	0861_SW036_220401	01 Apr 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW036	0861_SW036_221019	19 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW036	0861_SW036_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP_23	SW036	0861_SW036_231024	24 Oct 2023	EB2333887-AA	<0.02	<0.02	0.04	<0.02	0.06	-	<0.02	0.1	<0.02	<0.02	<0.02	<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	0.10	-	0.20	-	-	0.20	-
QLD_0861_PFASOMP_24	SW036	0861_SW036_240411	11 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFAS	SW037	0861_QC101_170913	13 Sep 2017	EB1719017	7.05	5.82	31.8	1.96	31.6	-	<0.002	0.56	3.58	14.7	2.70	4.19	0.085	0.018	0.004	<0.002	<0.002	<0.005	<0.005	0.992	0.115	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	63.4	-	71.5	-	-	105	-
QLD_0861_PFAS	SW037	0861_QC201_170914	13 Sep 2017	175963	8.9	7.7	31	2.0	40	-	0.006	2.2	1.9	13	1.7	3.6	0.065	0.027	0.003	<0.005	<0.01	<0.05	<0.01	1.0	0.14	0.002	<0.01	<0.005	<0.002	<0.005	<0.01	<0.002	<0.005	-	-	-	-	-	-	-
QLD_0861_PFAS	SW037	0861_SW037_0_170913	13 Sep 2017	EB1719017	7.34	6.14	30.1	2.12	29.7	-	<0.002	0.58	3.83	13.6	2.81	4.29	0.087	0.023	0.006	<0.002	<0.002	<0.005	<0.005	0.984	0.143	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	59.8	-	69.8	-	-	102	-
QLD_0861_PFAS	SW037	0861_QC101_190501	01 May 2019	EB1911387	0.34	0.31	2.06	0.08	1.64	-	<0.02	0.2	0.46	0.76	0.18	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	3.70	-	5.83	-	-	6.22	-
QLD_0861_PFAS	SW037	0861_QC201_190501	01 May 2019	217104	0.38	0.35	1.8	0.12	2.2	-	<0.02	0.29	0.51	0.69	0.24	0.25	0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.03	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	4.0	-	-	-	-	6.9	-
QLD_0861_PFAS	SW037	0861_SW037_190501	01 May 2019	EB1911387	0.32	0.31	2.03	0.07	1.53	-	<0.02	0.2	0.45	0.76	0.19	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	3.56	-	5.67	-	-	6.05	-
QLD_0861_PFAS	SW037	0861_SW037_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW037	0861_SW037_191119	19 Nov 2019	EB1931427	3.65	3.15	17.8	0.89	15.4	-	<0.02	1.3	2.64	8.00	1.51	2.66	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	1.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	33.2	-	54.0	-	-	58.1	-
QLD_0861_PFASOMP	SW037	0861_SW037_200415	15 Apr 2020	EB2010666-AE	3.03	3.54	12.2	0.41	8.27	-	<0.10	1.60	3.23	9.39	1.40	1.48	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	0.29	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	20.5	-	40.9	-	-	44.8	-
QLD_0861_PFASOMP	SW037	0861_SW037_201015	14 Oct 2020	EB2027176-AA	5.81	4.41	24.4	1.06	12.2	-	<0.10	3.32	3.74	11.7	2.35	4.03	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	0.80	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	36.6	-	68.4	-	-	73.8	-
QLD_0861_PFASOMP	SW037	0861_QC139_210330	30 Mar 2021	EB2108857	0.96	0.89	4.96	0.20	3.56	-	<0.10	<0.5	1.32	2.03	0.39	0.56	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	8.52	-	13.8	-	-	14.9	-
QLD_0861_PFASOMP	SW037	0861_QC239_210330	30 Mar 2021	RN1310437	0.83	0.66	3.1	0.09	1.3	<0.01	<0.01	0.47	1.1	1.7	0.36	0.42	0.018	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.043	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW037	0861_SW037_210330	30 Mar 2021	EB2108857	0.93	0.83	5.23	0.20	4.34	-	<0.10	<0.5	1.36	2.00	0.42	0.58	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	9.57	-	14.9	-	-	15.9	-
QLD_0861_PFASOMP	SW037	0861_SW037_211026	26 Oct 2021	EB2130850	0.60	0.40	2.49	0.13	2.53	-	<0.02	0.28	0.62	1.17	0.18	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	5.02	-	8.09	-	-	8.65	-
QLD_0861_PFASOMP	SW037	0861_SW037_220330	30 Mar 2022	EB2209950	0.28	0.23	1.53	0.08	1.49	-	<0.02	<0.1	0.18	0.38	0.07	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	3.02	-	4.03	-	-	4.34	-
QLD_0861_PFASOMP	SW037	0861_SW037_221021	21 Oct 2022	EB2231197	0.22	0.22	1.55	0.10	1.82	-	<0.02	<0.1	0.14	0.43	0.06	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	3.37	-	4.34	-	-	4.66	-
QLD_0861_PFASOMP_23	SW037	0861_SW037_230418	18 Apr 2023	EB2312062-AA	0.54	0.52	2.57	0.13	1.73	-	<0.02	<0.1	0.24	0.69	0.13	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	4.30	-	6.05	-	-	6.70	-
QLD_0861_PFASOMP_23	SW037	0861_SW037_231027	27 Oct 2023	EB2333887-AA	2.68	1.93	7.54	0.29	4.19	-	<0.02	0.5	1.15	3.24	1.04	1.43	0.03	<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	11.7	-	21.9	-	-	24.1	-
QLD_0861_PFASOMP_24	SW037	0861_SW037_240410	10 Apr 2024	EB2413910	0.38	0.34	2.09	0.09	2.42	-	<0.02	0.2	0.38	0.70	0.13	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	4.51	-	6.45	-	-	6.88	-
QLD_0861_PFAS	SW038	0861_SW038_171020	17 Oct 2017	EB1721894	0.008	0.005	0.046	<0.002	0.037	-	<0.002	<0.01	0.010	0.014	0.004	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	0.013	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	0.083	-	0.106	-	-	0.143	-
QLD_0861_PFAS	SW038	0861_SW038_190513	13 May 2019	EB1912390	<0.02	<0.02	<0.02	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-

TABLE A4: Surface Water Analytical Summary

					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorootadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																																				
QLD_0861_PFAS	SW038	0861_SW038_190513	13 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW038	0861_SW038_191126	29 Nov 2019	EB1932183	<0.02	<0.02	0.03	<0.02	0.03	-	<0.02	<0.10	<0.02	0.04	0.02	<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	0.06	-	0.12	-	-	0.12	-
QLD_0861_PFASOMP	SW038	0861_SW038_200414	14 Apr 2020	EB2010666-AE	0.05	0.06	0.35	<0.02	0.62	-	<0.02	<0.1	<0.16	0.17	0.04	0.03	<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	0.97	-	1.33	-	-	1.39	-
QLD_0861_PFASOMP	SW038	0861_SW038_201103	03 Nov 2020	EB2028860	0.03	0.02	0.23	<0.02	0.59	-	<0.02	<0.2	0.19	0.21	0.09	0.05	<0.02	0.05	0.10	0.06	<0.02	<0.05	<0.05	1.32	0.34	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.82	-	3.05	-	-	3.28	-
QLD_0861_PFASOMP	SW038	0861_QC137_210330	30 Mar 2021	EB2108857	<0.02	<0.02	0.03	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFASOMP	SW038	0861_QC237_210330	30 Mar 2021	RN1310437	<0.01	<0.01	0.019	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW038	0861_SW038_210330	30 Mar 2021	EB2108857	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW038	0861_SW038_211025	25 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW038	0861_SW038_220330	30 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW038	0861_SW038_221024	24 Oct 2022	EB2231825	<0.02	<0.02	0.04	<0.02	0.07	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.11	-	0.11	-	-	0.11	-
QLD_0861_PFASOMP_23	SW038	0861_SW038_231129	29 Nov 2023	EB2337879-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW039	0861_SW39_170530	30 May 2017	ES1713428	<0.002	<0.002	<0.002	<0.002	0.004	-	<0.002	<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	0.004	-	<0.002	-	-	0.004	-
QLD_0861_PFAS	SW039	0861_SW039_191119	19 Nov 2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW039	0861_SW39_191128	29 Nov 2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW039	0861_SW039_200415	15 Apr 2020	EB2010666-AF	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW039	0861_SW039_201014	14 Oct 2020	EB2027208-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.45	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW039	0861_SW039_210330	30 Mar 2021	EB2108857	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW039	0861_QC159_211022	22 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW039	0861_QC259_211022	22 Oct 2021	RN1333717	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW039	0861_SW039_211022	22 Oct 2021	EB2130815	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW039	0861_QC169_220328	28 Mar 2022	EB2209942	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	0.03	<0.02	<0.01	<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	<0.02	<0.05	<0.01	-	0.32	-	-	0.32	-
QLD_0861_PFASOMP	SW039	0861_QC269_220328	28 Mar 2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW039	0861_SW039_220328	28 Mar 2022	EB2209946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.10	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	-	0.10	-	-	0.10	-
QLD_0861_PFASOMP	SW039	0861_SW039_221020	20 Oct 2022	EB2231202	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW039	0861_SW039_230426	26 Apr 2023	EB2312761-AB	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW039	0861_SW039_231026	26 Oct 2023	EB2333898	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW039	0861_SW039_240412	12 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW040	0861_SW40_170602	02 Jun 2017	EB1711373	<0.02	<0.02	0.11	<0.02	0.09	-	<0.02	<0.1	<0.02	0.03	<0.02	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	0.20	-	0.24	-	-	0.24	-
QLD_0861_PFAS	SW040	0861_SW040_190506	06 May 2019	EB1911952	0.04	0.04	0.29	<0.02	0.30	-	<0.02	<0.1	0.04	0.08	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.59	-	0.77	-	-	0.81	-
QLD_0861_PFAS	SW040	0861_SW040_190506	06 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW040	0861_SW040_191120	20 Nov 2019	EB1931427	0.04	0.04	0.30	<0.02	0.34	-	<0.02	<0.1	<0.02	0.08	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.64	-	0.78	-	-	0.82	-
QLD_0861_PFASOMP	SW040	0861_SW040_200415	15 Apr 2020	EB2010666-AF	<0.02	<0.02	0.07	<0.02	0.12	-	<0.02	<0.1	<0.04	0.04	<0.02	<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	0.19	-	0.23	-	-	0.23	-
QLD_0861_PFASOMP	SW040	0861_SW040_201015	15 Oct 2020	EB2027208-AA	0.03	0.03	0.21	<0.02	0.27	-	<0.02	<0.15	0.04	0.08	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.48	-	0.65	-	-	0.68	-
QLD_0861_PFASOMP	SW040	0861_SW040_210415	15 Apr 2021	EB2111112	<0.02	<0.02	0.03	<0.02	0.06	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.09	-	0.09	-	-	0.09	-
QLD_0861_PFASOMP	SW040	0861_SW040_211019	19 Oct 2021	EB2130815	<0.02	<0.02	0.05	<0.02	0.10	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.15	-	0.17	-	-	0.17	-
QLD_0861_PFASOMP	SW040	0861_SW040_220328	28 Mar 2022	EB2209946	0.03	0.03	0.19	<0.02	0.16	-	<0.02	<0.1	<0.02	0.05	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.14	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.35	-	0.58	-	-	0.61	-
QLD_0861_PFASOMP	SW040	0861_SW040_221020	20 Oct 2022	EB2231202	<0.02	<0.02	0.14	<0.02	0.21	-	<0.02	<0.1	<0.02	0.04	<0.02	<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	0.35	-	0.39	-	-	0.39	-
QLD_0861_PFASOMP_23	SW040	0861_SW040_230418	18 Apr 2023	EB2312057	<0.02	<0.02	0.05	<0.02	0.10	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.15	-	0.15	-	-	0.15	-
QLD_0861_PFASOMP_23	SW040	0861_SW040_231026	26 Oct 2023	EB2333898	<0.02	<0.02	0.11	<0.02	0.15	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.26	-	0.28	-	-	0.28	-
QLD_0861_PFASOMP_24	SW040	0861_SW040_240412	12 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFAS	SW041	0861_QC108_171020	17 Oct 2017	EB1721894	0.768	0.498	4.51	0.315	7.10	-	0.013	0.10	0.434	1.21	0.240	0.304	0.031	0.011	<0.002	<0.002	<0.002	<0.005	<0.005	0.426	0.054	<0.005	0.015	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	11.6	-	8.54	-	-	16.0	-
QLD_0861_PFAS	SW041	0861_SW041_171020	17 Oct 2017	EB1721894	0.799	0.573	4.54	0.279	6.20	-	0.012	0.13	0.459	1.30	0.221	0.266	0.026	0.009	<0.002	<0.002	<0.002	<0.005	<0.005	0.389	0.042	<0.005	0.012	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	10.7	-	8.72	-	-	15.2	-
QLD_0861_PFAS	SW041	0861_QC208_171020	20 Oct 2017	178423	0.49	0.44	3.3	0.15	5.2	-	<0.02	0.23	0.42	1.0	0.15	0.24	0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.31	0.03	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	-	-	-	-	-	-	-
QLD_0861_PFAS	SW041	0861-QC208-171020	20 Oct 2017	178596	0.58	0.59	3.6	0.16	7.4	-	0.003	0.25	0.49	1.2	0.18	0.30	0.020	0.01	0.004	<0.005	<0.01	<0.05	<0.005	0.37	0.064	<0.001	<0.01	<0.02	<0.002	<0.005	<0.05	<0.002	<0.05	-	-	-	-	-	-	-
QLD_0861_PFAS	SW041	0861_QC102_190508	08 May 2019	EB1911952	1.76	1.67	12.0	0.61	8.46	-	<0.02	0.1	0.68	3.03	0.42	0.66	<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	20.5	-	27.2	-	-	29.5	-
QLD_0861_PFAS	SW041	0861_SW041_190508	08 May 2019	EB1911952	1.73	1.70	12.8	0.58	9.18	-	<0.02	0.3	0.66	2.80	0.39	0.66	0.03	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	0.07	<0.05	0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	22.0	-	28.7	-	-	31.0	-
QLD_0861_PFAS	SW041	0861_SW041_190508	08 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW041	0861_SW041_191119	19 Nov 2019	EB1931427	2.66	2.57	18.2	1.01	11.9	-	<0.02	0.6	0.98	4.04	0.65	1.01	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.22	<0.05	<0.05	0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	30.1	-	40.3	-	-	43.9	-
QLD_0861_PFASOMP	SW041	0861_SW041_200415	15 Apr 2020	EB2010666-AE	3.97	5.63	30.4	1.32	17.8	-	<0.10	0.85	1.57	7.76	0.93	1.30	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	0.27	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	48.2	-	64.8	-	-	71.8	-
QLD_0861_PFASOMP	SW041	0861_SW041_201015	15 Oct 2020	EB2027176-AA	3.74	3.35	24.4	1.22	13.4	-	<0.10	0.96	1.40	5.86	0.86	1.26	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	37.8	-	51.9	-	-	56.4	-
QLD_0861_PFASOMP	SW041	0861_SW041_210330	30 Mar 2021	EB2108857	1.23	1.18	8.44	0.50	8.83	-	<0.10	<0.5	0.68	2.26	0.35	0.48	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	17.3	-	22.3	-	-	24.0	-
QLD_0861_PFASOMP	SW041	0861_SW041_211026	26 Oct 2021	EB2130850	0.30	0.23	1.84	0.13	2.61	-	<0.02	<0.10	0.14	0.52	0.06	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	4.45	-	5.57	-	-	5.93	-
QLD_0861_PFASOMP	SW041	0861_SW041_220328	28 Mar 2022	EB2209950	0.98	1.08	7.45	0.51	8.46	-	<0.02	0.2	0.38	1.49	0.24	0.50	<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	15.9	-	19.8	-	-	21.4	-
QLD_0861_PFASOMP	SW041	0861_QC189_221020	20 Oct 2022	EB2231197	0.10	0.10	0.79	0.06	1.11	-	<0.02	<0.1	0.05	0.21	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	1.90	-	2.33	-	-	2.49	-
QLD_0861_PFASOMP	SW041	0861_QC289_221020	20 Oct 2022	RN1370747	0.062	0.061	0.52	0.02	0.67	<0.01	<0.01	0.1	0.033	0.11	0.014	0.032	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW041	0861_SW041_221020	20 Oct 2022	EB2231197	0.08	0.10	0.78	0.04	1.00	-	<0.02	<0.1	0.04	0.20	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	1.78	-	2.17	-	-	2.31	-
QLD_0861_PFASOMP_23	SW041	0861_SW041_230418	18 Apr 2023	EB2312062-AA	0.98	1.18	8.04	0.55	8.88	-	<0.04	0.3	0.40	1.47	0.25	0.45	<0.04	<0.04	<0.04	<0.04	<0.04	<0.10	<0.10	<0.10	<0.10	<0.10	<0.04	<0.10	<0.04	<0.10	<0.10	<0.04	<0.10	16.9	-	20.8	-	-	22.5	-
QLD_0861_PFASOMP_24	SW041	0861_SW041_240412	12 Apr 2024	EB2413910	0.67	0.67	5.20	0.28	5.41	-	<0.02	0.2	0.32	1.12	0.16	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	10.6	-	13.3	-	-	14.3	-
QLD_0861_PFAS	SW043	0861_SW43_170605	05 Jun 2017	EB1711471	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	0.07	<0.02	<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	<0.01	-	0.07	-	-	0.07	-
QLD_0861_PFAS	SW043	0861_SW043_191119	19 Nov 2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW043	0861_SW043_191128	29 Nov 2019	EB1932183	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_SW043_200428	28 Apr 2020	EB2011568	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_QC127_201015	15 Oct 2020	EB2027176-AB	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_QC227_201015	15 Oct 2020	RN1292028	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW043	0861_SW043_201015	15 Oct 2020	EB2027208-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_SW043_210415	15 Apr 2021	EB2111112	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_SW043_211022	22 Oct 2021	EB2130815	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_SW043_220404	04 Apr 2022	EB2209946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW043	0861_SW043_221020	20 Oct 2022	EB2231202	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW043	0861_SW043_230419	19 Apr 2023	EB2312057	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW043	0861_SW043_231026	26 Oct 2023	EB2333898	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW043	0861_SW043_240411	11 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW045	0861_SW45_170602	02 Jun 2017	EB1711373	<0.02	<0.02	0.11	<0.02	0.12	-	<0.02	<0.1	<0.02	0.03	<0.02	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	0.23	-	0.27	-	-	0.27	-
QLD_0861_PFAS	SW045	0861_SW045_190506	06 May 2019	EB1911952	0.06	0.06	0.46	0.03	0.53	-	<0.02	<0.1	0.05	0.12	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	0.99	-	1.27	-	-	1.36	-
QLD_0861_PFAS	SW045	0861_SW045_190506	06 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW045	0861_QC105_191120	20 Nov 2019	EB1931427	0.03	0.03	0.23	<0.02	0.33	-	<0.02	<0.1	0.03	0.07	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.56	-	0.71	-	-	0.74	-
QLD_0861_PFAS	SW045	0861_QC205_191120	20 Nov 2019	232494	0.10	0.07	0.50	0.01	0.34	-	<0.02	0.05	0.03	0.08	0.01	0.03	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	0.84	-	-	-	-	1.2	-
QLD_0861_PFAS	SW045	0861_SW045_191120	20 Nov 2019	EB1931427	0.04	0.04	0.28	<0.02	0.33	-	<0.02	<0.1	<0.02	0.08	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.61	-	0.75	-	-	0.79	-
QLD_0861_PFASOMP	SW045	0861_SW045_200414	15 Apr 2020	EB2010666-AF	<0.02	<0.02	0.06	<0.02	0.13	-	<0.02	<0.1	<0.02	0.03	<0.02	<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	0.19	-	0.22	-	-	0.22	-
QLD_0861_PFASOMP	SW045	0861_SW045_201015	15 Oct 2020	EB2027208-AA	<0.02	<0.02	0.04	<0.02	0.10	-	<0.02	<0.10	<0.02	0.02	<0.02	<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	0.14	-	0.16	-	-	0.16	-
QLD_0861_PFASOMP	SW045	0861_SW045_210415	15 Apr 2021	EB2111112	<0.02	<0.02	0.02	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.07	-	0.07	-	-	0.07	-
QLD_0861_PFASOMP	SW045	0861_SW045_211019	19 Oct 2021	EB2130815	<0.02	<0.02	0.03	<0.02	0.06	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.09	-	0.09	-	-	0.09	-
QLD_0861_PFASOMP	SW045	0861_SW045_220329	29 Mar 2022	EB2209946	<0.02	<0.02	0.09	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.13	-	0.13	-	-	0.13	-
QLD_0861_PFASOMP	SW045	0861_SW045_221020	20 Oct 2022	EB2231202	<0.02	<0.02	0.07	<0.02	0.10	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.17	-	0.17	-	-	0.17	-
QLD_0861_PFASOMP_23	SW045	0861_SW045_230418	18 Apr 2023	EB2312057	<0.02	<0.02	0.04	<0.02	0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.09	-	0.09	-	-	0.09	-
QLD_0861_PFASOMP_23	SW045	0861_SW045_231026	26 Oct 2023	EB2333898	<0.02	<0.02	0.06	<0.02	0.11	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.17	-	0.17	-	-	0.17	-
QLD_0861_PFASOMP_24	SW045	0861_QC104_240412	12 Apr 2024	EB2413950	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP_24	SW045	0861_QC204_240412	12 Apr 2024	RN1427801	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	SW045	0861_SW045_240412	12 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFAS	SW047	0861_SW47_170602	02 Jun 2017	EB1711373	0.72	0.53	3.59	0.15	1.88	-	<0.02	0.2	<0.02	1.51	0.35	0.43	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.10	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	5.47	-	8.78	-	-	9.49	-
QLD_0861_PFAS	SW047	0861_SW047_190501	01 May 2019	EB1911387	0.32	0.30	2.00	0.07	2.08	-	<0.02	0.2	0.70	0.98	0.26	0.27	0.03	<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	<0.02	<0.05	4.08	-	7.04	-	-	7.44	-
QLD_0861_PFAS	SW047	0861_SW047_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW047	0861_SW047_191120	20 Nov 2019	EB1931427	0.04	0.04	0.27	<0.02	0.12	-	<0.02	<0.1	<0.02	0.07	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.39	-	0.52	-	-	0.56	-
QLD_0861_PFASOMP	SW047	0861_SW047_200415	15 Apr 2020	EB2010666-AE	0.18	0.15	1.06	0.06	1.76	-	<0.02	0.14	0.30	0.37	0.10	0.14	<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	2.82	-	4.17	-	-	4.38	-
QLD_0861_PFASOMP	SW047	0861_SW047_201013	13 Oct 2020	EB2027172	0.49	0.43	2.53	0.09	1.90	-	0.03	<0.80	1.22	1.56	0.48	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	4.43	-	8.50	-	-	9.08	-
QLD_0861_PFASOMP	SW047	0861_SW047_210414	14 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW047	0861_SW047_211020	20 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW047	0861_SW047_220331	31 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP	SW047	0861_SW047_221019	19 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW047	0861_SW047_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW047	0861_SW047_231023	23 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.03	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-

TABLE A4: Surface Water Analytical Summary

Project ID	Location Code	Field ID	Date	Lab Report Number	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorooctadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
QLD_0861_PFASOMP_24	SW047	0861_SW047_240411	11 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW048	0861_QC103_170918	18 Sep 2017	EB1719278	0.11	0.33	2.39	0.27	13.4	-	0.02	0.4	0.45	1.84	0.20	0.54	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	3.03	0.60	<0.05	0.09	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	15.8	-	23.0	-	-	23.7	-
QLD_0861_PFAS	SW048	0861_QC203_170918	18 Sep 2017	EB1719278	0.11	0.34	2.48	0.28	14.2	-	<0.02	0.4	0.42	1.73	0.22	0.54	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	3.05	0.59	<0.05	0.09	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	16.7	-	23.7	-	-	24.4	-
QLD_0861_PFAS	SW048	0861_SW048_170918	18 Sep 2017	EB1719278	0.11	0.36	2.58	0.28	14.9	-	0.02	0.4	0.47	1.78	0.24	0.55	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	3.17	0.76	<0.05	0.12	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	17.5	-	25.0	-	-	25.8	-
QLD_0861_PFASOMP	SW048	0861_SW048_220328	28 Mar 2022	EB2209950	0.03	0.02	0.12	<0.02	0.38	-	<0.02	<0.1	0.02	0.14	<0.02	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	0.50	-	0.77	-	-	0.79	-
QLD_0861_PFASOMP	SW048	0861_SW048_221019	21 Oct 2022	EB2231197	<0.03	0.02	0.16	<0.02	0.43	-	<0.02	<0.1	0.02	0.08	<0.02	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	0.59	-	0.77	-	-	0.79	-
QLD_0861_PFASOMP_23	SW048	0861_SW048_230427	27 Apr 2023	EB2312761-AA	0.10	0.11	0.96	0.08	2.66	-	<0.02	<0.1	0.09	0.29	0.05	0.10	<0.02	<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	<0.02	<0.05	3.62	-	4.56	-	-	4.75	-
QLD_0861_PFASOMP_23	SW048	0861_SW048_231027	27 Oct 2023	EB2333887-AA	<0.14	0.08	0.54	0.04	2.42	-	<0.02	<0.1	0.08	0.34	0.14	0.18	0.04	0.03	<0.02	<0.02	<0.02	<0.05	<0.05	0.76	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	2.96	-	4.46	-	-	4.65	-
QLD_0861_PFAS	SW049	0861_SW049_170914	14 Sep 2017	EB1719065	0.21	0.15	1.09	0.06	2.33	-	<0.02	0.1	0.18	0.42	0.06	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	3.42	-	4.54	-	-	4.75	-
QLD_0861_PFAS	SW049	0861_SW049_190510	10 May 2019	EB1911952	1.16	0.94	6.06	0.30	5.22	-	<0.02	1.0	1.04	2.49	0.40	0.87	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	11.3	-	18.2	-	-	19.5	-
QLD_0861_PFAS	SW049	0861_SW049_190510	10 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW049	0861_QC108_200420	20 Apr 2020	EB2011246-AC	0.44	0.2	1.41	0.08	2.52	-	<0.02	0.3	0.38	0.73	0.11	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	3.93	-	6.12	-	-	6.4	-
QLD_0861_PFASOMP	SW049	0861_QC208_200420	20 Apr 2020	RN1274652	0.3	0.2	0.89	0.047	1.3	<0.01	<0.01	0.35	0.28	0.59	0.09	0.19	0.014	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW049	0861_SW049_200420	20 Apr 2020	EB2011246-AC	0.31	0.22	1.29	0.08	2.28	-	<0.02	<0.3	<0.28	0.69	0.11	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	3.57	-	4.9	-	-	5.2	-
QLD_0861_PFASOMP	SW049	0861_SW049_201013	13 Oct 2020	EB2027176-AA	0.70	0.46	2.80	0.14	4.30	-	<0.05	0.30	0.57	1.44	0.24	0.48	<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	7.10	-	10.8	-	-	11.4	-
QLD_0861_PFASOMP	SW049	0861_SW049_210413	13 Apr 2021	EB2111121	0.34	0.35	1.89	0.09	2.73	-	<0.02	0.3	0.37	0.73	0.15	0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	4.62	-	6.81	-	-	7.25	-
QLD_0861_PFASOMP	SW049	0861_SW049_211020	20 Oct 2021	EB2130835	0.35	0.23	2.07	0.11	2.40	-	<0.02	0.4	0.32	0.90	0.13	0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	4.47	-	6.87	-	-	7.21	-
QLD_0861_PFASOMP	SW049	0861_SW049_220331	31 Mar 2022	EB2209950	0.03	0.02	0.17	<0.02	0.64	-	<0.02	<0.1	0.02	0.06	<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	0.81	-	0.95	-	-	0.97	-
QLD_0861_PFASOMP	SW049	0861_QC187_221019	19 Oct 2022	EB2231197	0.03	<0.02	0.17	<0.02	0.46	-	<0.02	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	0.63	-	0.73	-	-	0.73	-
QLD_0861_PFASOMP	SW049	0861_QC287_221019	19 Oct 2022	EB2231197	0.03	<0.02	0.17	<0.02	0.44	-	<0.02	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	0.61	-	0.72	-	-	0.72	-
QLD_0861_PFASOMP	SW049	0861_SW049_221019	19 Oct 2022	EB2231197	0.03	<0.02	0.19	<0.02	0.47	-	<0.02	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	0.66	-	0.75	-	-	0.75	-
QLD_0861_PFASOMP_23	SW049	0861_SW049_230426	26 Apr 2023	EB2312761-AA	0.09	0.07	0.44	0.03	1.06	-	<0.02	<0.1	0.07	0.19	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	<0.02	<0.05	1.50	-	1.95	-	-	2.05	-
QLD_0861_PFASOMP_23	SW049	0861_SW049_231023	28 Oct 2023	EB2333894-AA	0.14	0.10	0.69	0.04	1.12	<0.02	<0.02	0.2	0.11	0.23	0.04	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	1.81	-	2.64	-	-	2.78	-
QLD_0861_PFASOMP_24	SW049	0861_QC102_240410	10 Apr 2024	EB2413950	0.08	0.05	0.30	<0.02	0.92	-	<0.02	<0.1	0.05	0.12	<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	1.22	-	1.51	-	-	1.56	-
QLD_0861_PFASOMP_24	SW049	0861_QC202_240410	10 Apr 2024	RN1427801	0.051	0.025	0.28	<0.01	0.75	<0.01	<0.01	0.077	0.049	0.092	<0.01	0.021	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_24	SW049	0861_SW049_240410	10 Apr 2024	EB2413910	0.07	0.04	0.29	<0.02	1.00	-	<0.02	<0.1	0.06	0.12	<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	1.29	-	1.58	-	-	1.62	-
QLD_0861_PFAS	SW050	0861_SW50_170530	30 May 2017	ES1713428	0.044	0.027	0.127	0.006	0.103	-	<0.002	<0.01	0.012	0.026	0.006	0.009	<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	0.230	-	0.251	-	-	0.360	-
QLD_0861_PFAS	SW050	0861_SW050_190501	01 May 2019	EB1911387	0.02	0.02	0.16	<0.03	0.13	-	<0.02	<0.1	0.06	0.07	<0.02	<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	0.29	-	0.44	-	-	0.46	-
QLD_0861_PFAS	SW050	0861_SW050_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW050	0861_SW050_191119	19 Nov 2019	EB1931427	0.06	0.05	0.38	<0.02	0.72	-	<0.02	<0.1	0.10	0.21	0.07	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	1.10	-	1.58	-	-	1.63	-
QLD_0861_PFASOMP	SW050	0861_SW050_200415	15 Apr 2020	EB2010666-AE	0.06	0.06	0.41	<0.02	0.62	-	<0.02	<0.1	<0.20	0.22	0.05	0.04	<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	1.03	-	1.48	-	-	1.54	-
QLD_0861_PFASOMP	SW050	0861_SW050_201014	14 Oct 2020	EB2027176-AA	<0.05	<0.05	0.12	<0.05	0.28	-	<0.05	<0.25	0.14	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	0.06	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	0.40	-	0.68	-	-	0.68	-
QLD_0861_PFASOMP	SW050	0861_SW050_210414	14 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW050	0861_SW050_211019	19 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW050	0861_SW050_220401	01 Apr 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFASOMP_23	SW050	0861_SW050_230511	11 May 2023	EB2314270	<0.02	<0.02	0.11	<0.02	0.11	-	<0.02	<0.1	<0.02	0.04	<0.02	<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	0.22	-	0.26	-	-	0.26	-
QLD_0861_PFASOMP_23	SW050	0861_SW050_231024	24 Oct 2023	EB2333887-AA	0.02	0.02	0.12	<0.02	0.39	-	<0.02	<0.1	0.03	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	0.51	-	0.62	-	-	0.64	-
QLD_0861_PFASOMP_24	SW050	0861_SW050_240411	11 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.01	-	0.01	-	-	0.01	-
QLD_0861_PFAS	SW051	0861_SW51_170602	02 Jun 2017	EB1711373	<0.02	0.05	0.33	<0.02	0.33	-	<0.02	<0.1	<0.02	0.09	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	0.66	-	0.80	-	-	0.85	-
QLD_0861_PFAS	SW051	0861_SW051_190501	01 May 2019	EB1911387	0.07	0.07	0.51	<0.02	0.49	-	<0.02	<0.1	0.19	0.25	0.05	0.05	<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	<0.05	<0.02	<0.05	1.00	-	1.77	-	-	1.84	-
QLD_0861_PFAS	SW051	0861_SW051_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW051	0861_SW051_191119	19 Nov 2019	EB1931427	0.06	0.05	0.38	<0.02	0.69	-	<0.02	<0.1	0.09	0.20	0.07	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	1.07	-	1.53	-	-	1.58	-
QLD_0861_PFAS	SW051	0861_SW051_191120	20 Nov 2019	EB1931427	0.03	<0.02	0.08	<0.02	0.07	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.15	-	0.20	-	-	0.20	-
QLD_0861_PFASOMP	SW051	0861_SW051_200415	15 Apr 2020	EB2010666-AE	<0.02	<0.02	0.23	<0.02	0.28	-	<0.02	<0.10	0.03	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	0.51	-	0.62	-	-	0.62	-
QLD_0861_PFASOMP	SW051	0861_SW051_201014	14 Oct 2020	EB2027176-AA	0.02	<0.02	0.16	<0.02	0.29	-	<0.02	<0.10	0.14	0.13	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	<0.05	<0.02	<0.05	0.45	-	0.86	-	-	0.86	-
QLD_0861_PFASOMP	SW051	0861_SW051_210413	13 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFASOMP	SW051	0861_SW051_211019	19 Oct 2021	EB2130835	<0.02	<0.02	0.06	<0.02	0.08	-	<0.02	<0.1	<0.02	0.03	<0.02	<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	0.14	-	0.17	-	-	0.17	-
QLD_0861_PFASOMP	SW051	0861_SW051_220401	01 Apr 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.02	-	0.02	-	-	0.02	-
QLD_0861_PFASOMP	SW051	0861_SW051_221020	20 Oct 2022	EB2231197	0.03	0.02	0.16	<0.02	0.17	-	<0.02	<0.1	0.02	0.06	<0.02	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	0.33	-	0.45	-	-	0.47	-
QLD_0861_PFASOMP_23	SW051	0861_SW051_230419	19 Apr 2023	EB2312062-AA	<0.02	<0.02	0.04	<0.02	0.09	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.13	-	0.13	-	-	0.13	-
QLD_0861_PFASOMP_23	SW051	0861_SW051_231024	24 Oct 2023	EB2333887-AA	0.02	0.03	0.17	<0.02	0.37	-	<0.02	<0.1	0.04	0.06	<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	0.54	-	0.69	-	-	0.72	-
QLD_0861_PFASOMP_24	SW051	0861_SW051_240411	11 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	0.04	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.04	-	0.04	-	-	0.04	-
QLD_0861_PFAS	SW052	0861_QC01_SW_170530	30 May 2017	ES1713428	<0.002	<0.002	0.002	<0.002	0.003	-	<0.002	<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	0.005	-	0.002	-	-	0.005	-
QLD_0861_PFAS	SW052	0861_QC02_SW_170530	30 May 2017	168440	<0.001	<0.001	<0.001	<0.001	0.002	-	<0.002	0.005	<0.002	0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.002	<0.005	<0.01	<0.002	<0.05	-	-	-	-	-	-	-
QLD_0861_PFAS	SW052	0861_SW52_170530	30 May 2017	ES1713428	<0.002	<0.002	0.002	<0.002	0.003	-	<0.002	<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	0.005	-	0.004	-	-	0.007	-
QLD_0861_PFAS	SW052	0861_SW052_190510	10 May 2019	EB1911952	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW052	0861_SW052_190510	10 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW052	0861_SW052_191120	20 Nov 2019	EB1931427	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW052	0861_SW052_200420	20 Apr 2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	0.1	<0.02	<0.02	<0.02	<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	<0.01	-	0.1	-	-	0.1	-
QLD_0861_PFASOMP	SW052	0861_SW052_201013	13 Oct 2020	EB2027176-AA	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.25	<0.05	<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	<0.05	-	<0.05	-	-	<0.05	-
QLD_0861_PFASOMP	SW052	0861_SW052_210413	13 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW052	0861_SW052_211020	20 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW052	0861_SW052_220331	31 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW052	0861_SW052_221019	19 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW052	0861_SW052_230426	26 Apr 2023	EB2312761-AA	<0.02	<0.02	0.01	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.03	-	0.03	-	-	0.03	-
QLD_0861_PFASOMP_24	SW052	0861_SW052_240410	10 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW053	0861_SW053_171020	17 Oct 2017	EB1721894	0.201	0.171	2.15	0.090	3.14	-	<0.002	0.01	0.046	0.358	0.036	0.056	0.003	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	0.012	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	5.29	-	3.04	-	-	6.27	-
QLD_0861_PFAS	SW053	SW053_191203	03 Dec 2019	EB1932627	0.03	0.04	0.40	<0.02	0.42	-	<0.02	<0.1	0.03	0.08	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.82	-	0.98	-	-	1.02	-
QLD_0861_PFASOMP	SW053	0861_SW053_200421	21 Apr 2020	EB2011246-AC	<0.02	<0.02	0.03	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP	SW053	0861_SW053_201021	21 Oct 2020	EB2027539	<0.02	<0.02	0.06	<0.02	0.15	-	<0.02	<0.1	<0.02	0.04	<0.02	<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	0.21	-	0.25	-	-	0.25	-
QLD_0861_PFASOMP	SW053	0861_SW053_210419	19 Apr 2021	EB2111121	<0.02	<0.02	0.04	<0.02	0.10	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.14	-	0.14	-	-	0.14	-
QLD_0861_PFASOMP	SW053	0861_SW053_211025	25 Oct 2021	EB2130835	0.06	0.06	0.52	<0.02	0.49	-	<0.02	<0.1	0.02	0.11	<0.02	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	1.01	-	1.21	-	-	1.27	-
QLD_0861_PFASOMP	SW053	0861_SW053_220406	06 Apr 2022	EB2209951	<0.02	<0.02	0.11	<0.02	0.11	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.22	-	0.22	-	-	0.22	-
QLD_0861_PFASOMP	SW053	0861_SW053_221024	24 Oct 2022	EB2231825	<0.02	0.02	0.18	<0.02	0.17	-	<0.02	<0.1	<0.02	0.04	<0.02	<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	0.35	-	0.39	-	-	0.41	-
QLD_0861_PFASOMP_23	SW053	0861_SW053_230421	21 Apr 2023	EB2312062-AA	<0.02	<0.02	0.03	<0.02	0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	0.05	-	0.05	-	-	0.05	-
QLD_0861_PFASOMP_23	SW053	0861_SW053_231129	29 Nov 2023	EB2337879-AA	0.05	0.04	0.41	0.02	1.10	-	<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	1.51	-	1.64	-	-	1.70	-
QLD_0861_PFASOMP_24	SW053	0861_SW053_240418	18 Apr 2024	EB2413910	<0.02	<0.02	0.13	<0.02	0.17	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.30	-	0.32	-	-	0.32	-
QLD_0861_PFAS	SW056	0861_SW056_170914	14 Sep 2017	EB1719065	0.23	0.20	1.82	0.10	3.95	-	<0.02	<0.1	0.08	0.46	0.05	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	5.77	-	6.73	-	-	7.03	-
QLD_0861_PFAS	SW056	0861_SW056_190401	01 May 2019	EB1911387	0.11	0.10	0.81	0.02	1.11	-	<0.02	<0.1	0.19	0.32	0.08	0.09	<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	1.92	-	2.79	-	-	2.91	-
QLD_0861_PFAS	SW056	0861_SW056_190401	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW056	0861_QC101_191118	18 Nov 2019	EB1931427	0.19	0.15	1.28	0.06	2.66	-	<0.02	0.1	0.06	0.37	0.05	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	3.94	-	4.80	-	-	5.01	-
QLD_0861_PFAS	SW056	0861_QC202_191118	18 Nov 2019	231783	0.19	0.16	1.4	0.06	2.8	-	<0.02	0.1	0.2	0.34	0.06	0.08	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	4.2	-	-	-	-	5.4	-
QLD_0861_PFAS	SW056	0861_SW056_191118	19 Nov 2019	EB1931427	0.20	0.15	1.30	0.06	2.92	-	<0.02	0.1	0.06	0.38	0.05	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	4.22	-	5.10	-	-	5.31	-
QLD_0861_PFAS	SW056	0861_QC102_191118	21 Nov 2019	EB1931427	0.21	0.15	1.31	0.06	2.68	-	<0.02	<0.1	0.06	0.37	0.06	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	3.99	-	4.78	-	-	4.99	-
QLD_0861_PFASOMP	SW056	0861_QC104_200415	15 Apr 2020	EB2010666-AE	0.40	0.28	2.27	0.11	2.32	-	<0.02	0.30	0.63	0.79	0.22	0.23	<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	4.59	-	7.34	-	-	7.73	-
QLD_0861_PFASOMP	SW056	0861_QC204_200415	15 Apr 2020	RN1271947	0.32	0.27	2.3	0.063	1.6	<0.01	<0.01	0.24	0.54	0.76	0.16	0.16	0.013	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.14	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW056	0861_QC204_200415	15 Apr 2020	RN1274650	0.32	0.27	2.3	0.063	1.6	<0.01	<0.01	0.24	0.54	0.76	0.16	0.16	0.013	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.14	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW056	0861_SW056_200415	15 Apr 2020	EB2010666-AE	0.35	0.32	2.80	0.08	1.52	-	<0.02	0.30	0.58	0.96	0.24	0.20	<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	<0.05	<0.02	<0.05	4.32	-	7.08	-	-	7.48	-
QLD_0861_PFASOMP	SW056	0861_QC131_201019	19 Oct 2020	EB2027539	0.14	0.13	1.21	0.06	2.51	-	<0.02	0.1	0.12	0.31	0.05	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	3.72	-	4.53	-	-	4.72	-
QLD_0861_PFASOMP	SW056	0861_QC231_201019	19 Oct 2020	RN1292508	0.14	0.11	1.1	0.039	2.4	<0.01	<0.01	0.087	0.12	0.28	0.046	0.082	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.013	<0.01	<0.01	0.014	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW056	0861_SW056_201019	19 Oct 2020	EB2027539	0.15	0.13	1.13	0.05	2.72	-	<0.02	0.1	0.13	0.32	0.05	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	3.85	-	4.70	-	-	4.90	-
QLD_0861_PFASOMP	SW056	0861_SW056_210330	30 Mar 2021	EB2108857	0.25	0.24	1.61	0.05	1.02	-	<0.02	0.3	0.77	0.83	0.18	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.25	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	2.63	-	5.39	-	-	5.68	-
QLD_0861_PFASOMP	SW056	0861_SW056_211026	26 Oct 2021	EB2130850	0.29	0.24	1.43	0.06	1.13	-	<0.02	0.27	0.52	0.79	0.14	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.10	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	2.56	-	4.82	-	-	5.12	-
QLD_0861_PFASOMP	SW056	0861_SW056_220328	28 Mar 2022	EB2209950	0.66	0.58	2.99	0.15	2.82	-	<0.02	0.2	0.64	1.40	0.29	0.43	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	<0.05	<0.02	<0.05	5.81	-	9.59	-	-	10.3	-
QLD_0861_PFASOMP	SW056	0861_QC191_221021	21 Oct 2022	EB2231197	0.34	0.35	2.51	0.10	2.34	-	<0.02	0.1	0.32	0.89	0.18	0.20	<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	4.85	-	6.94	-	-	7.39	-
QLD_0861_PFASOMP	SW056	0861_QC291_221021	21 Oct 2022	RN1370747	0.22	0.19	1.6	0.04	1.4	<0.01	<0.01	0.093	0.21	0.45	0.096	0.11	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.036	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW056	0861_SW056_221021	21 Oct 2022	EB2231197	0.35	0.36	2.69	0.10	2.31	-	<0.02	0.1	0.32	0.88	0.18	0.20	<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	5.00	-	7.09	-	-	7.55	-
QLD_0861_PFASOMP_23	SW056	0861_SW056_230418	18 Apr 2023	EB2312062-AA	0.17	0.14	0.80	0.04	1.40	-	<0.02	<0.1	0.16	0.27	0.06	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	2.20	-	2.94	-	-	3.12	-
QLD_0861_PFASOMP_23	SW056	0861_SW056_231024	24 Oct 2023	EB2333887-AA	0.79	0.69	3.34	0.18	4.43	-	<0.02	0.3	0.78	1.18	0.46	0.48	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	7.77	-	11.8	-	-	12.7	-
QLD_0861_PFASOMP_24	SW056	0861_SW056_240409	09 Apr 2024	EB2413910	0.14	0.13	0.90	0.04	1.29	-	<0.02	0.1	0.24	0.34	0.08	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	2.19	-	3.19	-	-	3.36	-
QLD_0861_PFAS	SW059	0861_SW059_0_170913	13 Sep 2017	EB1719017	0.052	0.066	0.459	0.018	0.874	-	<0.002	0.11	0.288	0.418	0.088	0.098	0.010	0.004	<0.002	<0.002	<0.002	<0.005	<0.005	0.007	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	1.33	-	1.59	-	-	2.49	-

TABLE A4: Surface Water Analytical Summary

Project ID	Location Code	Field ID	Date	Lab Report Number	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorooctadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
QLD_0861_PFAS	SW059	0861_SW059_190429	29 Apr 2019	EB1911387	1.56	1.60	9.31	0.45	8.15	-	<0.02	0.6	1.53	3.99	0.78	1.42	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.46	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	17.5	-	27.8	-	-	29.9	-
QLD_0861_PFAS	SW059	0861_SW059_190429	29 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW059	0861_SW059_201103	03 Nov 2020	EB2028860	1.31	0.99	5.38	0.33	10.4	-	0.07	0.7	1.10	2.68	0.49	0.82	0.06	0.03	<0.02	<0.02	<0.02	<0.05	<0.05	0.13	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	15.8	-	23.0	-	-	24.5	-
QLD_0861_PFASOMP	SW059	0861_SW059_210330	30 Mar 2021	EB2108857	4.00	4.03	21.3	0.69	9.38	-	<0.10	3.0	9.12	14.6	2.79	3.62	0.12	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	3.08	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	30.7	-	70.9	-	-	75.7	-
QLD_0861_PFASOMP	SW059	0861_SW059_211026	26 Oct 2021	EB2130850	1.05	0.72	4.03	0.25	6.05	-	<0.02	0.79	1.70	2.27	0.43	0.59	0.03	<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	10.1	-	17.0	-	-	18.0	-
QLD_0861_PFASOMP	SW059	0861_SW059_220328	28 Mar 2022	EB2209950	0.13	0.11	0.66	0.03	0.92	-	<0.02	<0.1	0.15	0.23	0.06	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	1.58	-	2.22	-	-	2.36	-
QLD_0861_PFASOMP	SW059	0861_SW059_221021	21 Oct 2022	EB2231197	0.52	0.52	3.27	0.20	5.41	-	<0.02	0.2	0.58	1.41	0.24	0.55	0.04	<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	8.68	-	12.3	-	-	13.0	-
QLD_0861_PFASOMP_23	SW059	0861_QC101_230417	17 Apr 2023	EB2312062-AA	0.39	0.39	2.19	0.10	2.59	-	<0.02	0.3	0.62	0.86	0.18	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	4.78	-	7.35	-	-	7.84	-
QLD_0861_PFASOMP_23	SW059	0861_QC201_230417	17 Apr 2023	RN1393124	0.35	0.28	1.8	0.052	2	<0.01	<0.01	0.27	0.45	0.67	0.15	0.15	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	SW059	0861_SW059_230417	17 Apr 2023	EB2312062-AA	0.44	0.38	2.28	0.10	2.66	-	<0.02	0.3	0.68	0.89	0.16	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	4.94	-	7.64	-	-	8.12	-
QLD_0861_PFASOMP_23	SW059	0861_SW059_231027	27 Oct 2023	EB2333887-AA	0.88	0.59	3.12	0.15	4.20	-	<0.02	0.2	0.43	0.89	0.30	0.49	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	7.32	-	10.5	-	-	11.3	-
QLD_0861_PFASOMP_24	SW059	0861_SW059_240409	09 Apr 2024	EB2413910	1.07	1.08	6.10	0.28	8.67	-	<0.02	0.9	2.24	2.93	0.75	1.00	0.06	<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	<0.02	<0.05	14.8	-	24.0	-	-	25.4	-
QLD_0861_PFAS	SW064	0861_SW064_171019	19 Oct 2017	EB1721835	0.634	0.349	1.84	0.040	1.43	-	<0.002	0.03	0.167	0.385	0.050	0.048	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	3.27	-	3.50	-	-	4.98	-
QLD_0861_PFASOMP	SW064	0861_SW064_210419	19 Apr 2021	EB2111121	0.32	0.19	0.84	0.03	0.87	-	<0.02	0.2	0.14	0.27	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	1.71	-	2.70	-	-	2.92	-
QLD_0861_PFASOMP	SW064	0861_SW064_211025	25 Oct 2021	EB2130835	0.29	0.13	0.79	0.03	0.71	-	<0.02	0.11	0.10	0.26	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	1.50	-	2.32	-	-	2.48	-
QLD_0861_PFASOMP	SW064	0861_QC180_220406	06 Apr 2022	EB2209942	0.24	0.15	0.72	0.03	0.75	-	<0.02	<0.1	0.08	0.18	<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	1.47	-	2.01	-	-	2.19	-
QLD_0861_PFASOMP	SW064	0861_QC280_220406	06 Apr 2022	RN1349008	0.14	0.097	0.55	0.013	0.6	<0.01	<0.01	0.069	0.054	0.12	0.015	0.024	<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	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW064	0861_SW064_220406	06 Apr 2022	EB2209951	0.20	0.14	0.74	<0.02	0.87	-	<0.02	<0.1	<0.10	0.19	0.03	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	1.61	-	2.07	-	-	2.21	-
QLD_0861_PFASOMP	SW064	0861_SW064_221024	24 Oct 2022	EB2231825	0.04	0.02	0.24	<0.02	0.49	-	<0.02	<0.1	<0.02	0.06	<0.02	<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	0.73	-	0.83	-	-	0.85	-
QLD_0861_PFASOMP_23	SW064	0861_SW064_230421	21 Apr 2023	EB2312062-AA	0.18	0.12	0.62	0.02	0.65	-	<0.02	<0.1	<0.04	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	1.27	-	1.58	-	-	1.72	-
QLD_0861_PFASOMP_23	SW064	0861_SW064_231129	29 Nov 2023	EB2337879-AA	0.42	0.20	0.83	0.04	0.95	-	<0.02	<0.1	0.10	0.16	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	1.78	-	2.52	-	-	2.76	-
QLD_0861_PFASOMP_24	SW064	0861_SW064_240418	18 Apr 2024	EB2413910	0.51	0.32	1.29	<0.03	1.44	-	<0.02	0.3	0.23	0.45	0.04	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	2.73	-	4.32	-	-	4.64	-
QLD_0861_PFAS	SW067	0861_SW067_171020	17 Oct 2017	EB1721894	0.108	0.098	1.10	0.051	1.42	-	<0.002	<0.01	0.111	0.366	0.152	0.127	0.043	0.043	0.018	0.018	0.005	<0.005	<0.005	0.026	0.029	<0.005	0.003	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	2.52	-	2.12	-	-	3.72	-
QLD_0861_PFAS	SW067	SW067_191203	03 Dec 2019	EB1932627	4.03	3.63	24.2	0.96	26.6	-	<0.25	<1.2	1.73	5.93	0.44	0.44	<0.25	<0.25	<0.25	<1.26	<0.25	<0.62	<0.25	<0.25	<0.25	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.25	<0.62	50.8	-	63.4	-	-	68.0	-
QLD_0861_PFASOMP	SW067	0861_SW067_200421	21 Apr 2020	EB2011246-AC	3.61	2.74	15.3	0.61	14.3	-	<0.03	0.6	1.72	3.45	0.3	0.48	0.04	<0.03	<0.03	<0.03	<0.03	<0.08	<0.05	<0.05	<0.05	<0.05	<0.03	<0.08	<0.03	<0.08	<0.08	<0.03	<0.08	29.6	-	39.8	-	-	43.2	-
QLD_0861_PFASOMP	SW067	0861_SW067_201021	21 Oct 2020	EB2027539	6.52	5.75	38.4	0.85	20.6	-	<0.05	2.2	2.93	10.2	0.57	0.79	0.06	<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	59.0	-	82.2	-	-	88.9	-
QLD_0861_PFASOMP	SW067	0861_SW067_210419	19 Apr 2021	EB2111121	2.63	2.46	15.6	0.88	17.3	-	0.07	1.6	1.93	3.35	0.36	0.54	0.06	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	32.9	-	43.3	-	-	46.8	-
QLD_0861_PFASOMP	SW067	0861_SW067_211025	25 Oct 2021	EB2130835	1.70	1.48	10.1	0.31	9.39	-	<0.05	3.0	3.78	4.67	0.48	0.55	0.14	<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	19.5	-	33.7	-	-	35.6	-
QLD_0861_PFASOMP	SW067	0861_SW067_221024	24 Oct 2022	EB2231825	0.52	0.47	3.48	0.13	4.24	-	<0.02	0.5	0.55	0.94	0.13	0.20	0.09	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	7.72	-	10.6	-	-	11.2	-
QLD_0861_PFASOMP_23	SW067	0861_SW067_230421	21 Apr 2023	EB2312062-AA	6.04	5.02	27.6	0.82	12.5	-	<0.05	3.6	4.03	6.23	0.51	0.56	<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	40.1	-	61.1	-	-	66.9	-
QLD_0861_PFASOMP_23	SW067	0861_SW067_231129	29 Nov 2023	EB2337879-AA	1.96	1.17	5.88	0.21	6.41	-	<0.04	1.2	1.89	1.97	0.20	0.27	0.07	0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	12.3	-	19.8	-	-	21.2	-
QLD_0861_PFAS	SW076	0861_SW076_SW_170912	13 Sep 2017	EB1718855	1.92	1.97	8.58	0.178	25.9	-	<0.002	0.24	1.61	4.68	0.902	1.29	0.057	0.009	<0.002	<0.002	<0.002	<0.005	<0.005	0.038	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	34.5	-	21.2	-	-	47.4	-
QLD_0861_PFAS	SW076	0861_SW076_190501	01 May 2019	EB1911387	0.37	0.38	2.66	0.11	2.79	-	<0.02	0.2	0.75	1.07	0.27	0.37	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.35	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	5.45	-	8.83	-	-	9.35	-
QLD_0861_PFAS	SW076	0861_SW076_190501	01 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW076	0861_QC103_190508	31 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW076	0861_SW076_200415	15 Apr 2020	EB2010666-AE	0.48	0.42	2.17	0.09	2.27	-	<0.02	<0.5	<1.12	1.20	0.36	0.29	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.21	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	4.44	-	6.98	-	-	7.51	-
QLD_0861_PFASOMP	SW076	0861_SW076_201110	10 Nov 2020	EB2029508	0.26	0.21	1.40	0.09	3.68	-	0.03	0.2	0.37	0.56	0.19	0.25	0.04	0.04	<0.02	<0.02	<0.02	<0.05	<0.05	0.28	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	5.08	-	7.19	-	-	7.60	-
QLD_0861_PFASOMP	SW076	0861_SW076_210330	30 Mar 2021	EB2108857	0.49	0.45	2.74	0.10	1.98	-	<0.10	0.6	1.80	1.60	0.38	0.32	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	2.26	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	4.72	-	12.2	-	-	12.7	-
QLD_0861_PFASOMP	SW076	0861_SW076_211026	26 Oct 2021	EB2130850	0.41	0.30	1.83	0.10	2.07	-	<0.02	0.26	0.61	0.95	0.18	0.20	<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	3.90	-	6.69	-	-	7.09	-
QLD_0861_PFASOMP	SW076	0861_SW076_220328	28 Mar 2022	EB2209950	0.83	0.75	3.72	0.19	3.64	-	<0.02	0.3	0.96	1.78	0.41	0.60	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.28	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	7.36	-	12.5	-	-	13.5	-
QLD_0861_PFASOMP_23	SW076	0861_QC103_230418	18 Apr 2023	EB2312062-AB	0.45	0.34	1.76	0.09	1.98	-	<0.02	0.2	0.50	0.81	0.17	0.26	<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	3.74	-	6.30	-	-	6.73	-
QLD_0861_PFASOMP_23	SW076	0861_QC203_230418	18 Apr 2023	RN1393124	0.3	0.27	1.8	0.059	1.5	<0.01	<0.01	0.21	0.41	0.64	0.15	0.18	0.011	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.16	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	SW076	0861_SW076_230418	18 Apr 2023	EB2312062-AA	0.39	0.34	1.83	0.10	1.93	-	<0.02	0.2	0.46	0.78	0.18	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.20	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	3.76	-	6.21	-	-	6.65	-
QLD_0861_PFASOMP_23	SW076	0861_SW076_231027	27 Oct 2023	EB2333887-AA	0.70	0.60	3.10	0.16	3.41	-	<0.02	0.3	0.66	0.99	0.38	0.47	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	6.51	-	10.0	-	-	10.8	-
QLD_0861_PFASOMP_24	SW076	0861_SW076_240409	09 Apr 2024	EB2413910	0.56	0.52	3.38	0.17	4.73	-	<0.02	0.4	0.99	1.34	0.32	0.40	<0.03	<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	8.11	-	12.2	-	-	12.9	-
QLD_0861_PFAS	SW079	0861_SW079_171020	17 Oct 2017	EB1721894	0.916	0.676	5.96	0.423	8.62	-	0.030	0.05	0.544	1.58	0.288	0.384	0.034	0.013	0.002	<0.002	<0.002	<0.005	<0.005	0.514	0.078	<0.005	0.028	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	14.6	-	11.0	-	-	20.1	-
QLD_0861_PFASOMP	SW079	0861_SW079_200421	21 Apr 2020	EB2011246-AC	4.38	5.26	34.3	1.58	15.9	-	<0.06	0.4	1.2	6.63	0.97	1.54	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.16	<0.16	<0.06	<0.16	50.2	-	65.3	-	-	72.2	-
QLD_0861_PFASOMP	SW079	0861_SW079_201021	21 Oct 2020	EB2027539	3.93	3.66	28.5	1.29	18.2	-	0.08	0.6	1.13	6.03	0.87	1.42	<0.04	<0.04	<0.04	<0.04	<0.04	<0.11	<0.05	0.06	<0.05	<0.05	<0.04	<0.11	<0.04	<0.11	<0.11	<0.04	<0.11	46.7	-	60.7	-	-	65.8	-
QLD_0861_PFASOMP	SW079	0861_QC145_210419	19 Apr 2021	EB2111121	1.81	2.68	13.2	0.76	10.1	-	<0.02	0.4	0.93	3.24	0.54	0.85	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	23.3	-	31.1	-	-	34.5	-
QLD_0861_PFASOMP	SW079	0861_QC245_210419	19 Apr 2021	RN1313031	1.7	1.5	10	0.49	6.3	<0.01	<0.01	0.42	0.73	2.2	0.41	0.6	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.04	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW079	0861_SW079_210419	19 Apr 2021	EB2111121	1.90	3.26	13.7	1.02	12.8	-	0.10	0.4	1.06	3.59	0.60	0.89	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	26.5	-	34.9	-	-	39.3	-
QLD_0861_PFASOMP	SW079	0861_SW079_211025	25 Oct 2021	EB2130835	0.06	0.05	0.32	<0.02	0.41	-	<0.02	<0.1	0.04	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	0.73	-	0.98	-	-	1.03	-
QLD_0861_PFASOMP	SW079	0861_SW079_220406	06 Apr 2022	EB2209951	1.23	1.33	8.57	0.46	7.01	-	<0.02	<0.3	0.55	1.94	0.31	0.51	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	0.08	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	15.6	-	20.2	-	-	22.0	-
QLD_0861_PFASOMP	SW079	0861_SW079_221024	24 Oct 2022	EB2231825	0.08	0.08	0.74	0.03	1.02	-	<0.02	<0.1	0.05	0.16	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	1.76	-	2.08	-	-	2.19	-
QLD_0861_PFASOMP_23	SW079	0861_SW079_230421	21 Apr 2023	EB2312062-AA	1.09	1.15	8.47	0.48	8.34	-	<0.02	0.2	0.51	1.70	0.27	0.43	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	16.8	-	21.0	-	-	22.6	-
QLD_0861_PFASOMP_23	SW079	0861_SW079_231129	29 Nov 2023	EB2337879-AA	<0.02	<0.02	0.05	<0.02	0.08	-	<0.02	<0.1	<0.02	0.02	<0.02	<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	0.13	-	0.15	-	-	0.15	-
QLD_0861_PFASOMP_24	SW079	0861_SW079_240418	18 Apr 2024	EB2413910	1.00	1.13	8.35	0.41	7.47	-	<0.02	0.3	0.52	1.90	0.25	0.45	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	<0.05	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	15.8	-	20.2	-	-	21.8	-
QLD_0861_PFAS	SW080	0861_SW080_171020	17 Oct 2017	EB1721894	0.630	0.535	4.18	0.188	4.28	-	0.007	0.10	0.241	0.980	0.124	0.148	0.010	0.004	<0.002	<0.002	<0.002	<0.005	<0.005	0.045	0.008	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	8.46	-	6.99	-	-	11.5	-
QLD_0861_PFAS	SW080	0861_SW080_190513	13 May 2019	EB1912390	3.03	3.21	22.4	1.38	18.4	-	<0.02	0.6	0.99	5.02	0.67	1.16	<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	40.8	-	52.3	-	-	56.9	-
QLD_0861_PFAS	SW080	0861_SW080_190513	13 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW080	0861_QC203_191203	03 Dec 2019	232657	1.1	0.97	7.9	0.49	9.0	-	<0.02	0.22	0.41	1.6	0.26	0.42	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.11	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	17	-	-	-	-	22	-
QLD_0861_PFAS	SW080	QC103_191203	03 Dec 2019	EB1932627	0.90	1.01	6.71	0.46	8.82	-	<0.02	0.2	0.33	1.63	0.21	0.38	<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	15.5	-	19.3	-	-	20.7	-
QLD_0861_PFAS	SW080	SW080_191203	03 Dec 2019	EB1932627	0.72	0.74	5.79	0.37	8.43	-	<0.25	<1.2	<0.25	0.97	<0.25	<0.25	<0.25	<0.25	<0.25	<1.00	<0.25	<0.62	<0.25	<0.25	<0.25	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.25	<0.62	14.2	-	15.9	-	-	17.0	-
QLD_0861_PFASOMP	SW080	0861_SW080_200421	21 Apr 2020	EB2011246-AC	3.99	4.78	31.7	1.7	19.8	-	<0.06	0.3	1.03	5.77	0.83	1.38	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.06	<0.06	<0.06	<0.06	<0.16	<0.06	<0.16	<0.16	<0.06	<0.16	51.5	-	64.8	-	-	71.3	-
QLD_0861_PFASOMP	SW080	0861_SW080_201021	21 Oct 2020	EB2027539	2.84	2.84	21.2	1.03	13.6	-	<0.04	0.5	0.81	4.47	0.62	1.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.10	<0.05	<0.05	<0.05	<0.05	<0.04	<0.10	<0.04	<0.10	<0.10	<0.04	<0.10	34.8	-	45.1	-	-	49.0	-
QLD_0861_PFASOMP	SW080	0861_SW080_210419	19 Apr 2021	EB2111121	3.46	3.62	26.0	1.60	29.9	-	<0.05	0.8	1.44	6.20	0.88	1.50	<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	55.9	-	70.2	-	-	75.4	-
QLD_0861_PFASOMP	SW080	0861_SW080_211025	25 Oct 2021	EB2130835	0.19	0.17	1.85	0.11	3.12	-	<0.02	<0.10	0.11	0.41	0.05	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	4.97	-	5.82	-	-	6.10	-
QLD_0861_PFASOMP	SW080	0861_SW080_220406	06 Apr 2022	EB2209951	2.54	3.15	19.8	1.21	16.8	-	<0.02	0.5	1.06	4.14	0.63	1.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.06	<0.05	0.14	<0.05	<0.05	<0.02	<0.06	<0.02	<0.06	<0.06	<0.02	<0.06	36.6	-	46.8	-	-	51.2	-
QLD_0861_PFASOMP	SW080	0861_SW080_221024	24 Oct 2022	EB2231825	<0.10	<0.10	0.76	<0.10	1.22	-	<0.10	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.25	<0.10	<0.25	<0.25	<0.10	<0.25	1.98	-	1.98	-	-	1.98	-
QLD_0861_PFASOMP_23	SW080	0861_SW080_230421	21 Apr 2023	EB2312062-AA	2.62	2.98	22.0	1.32	23.9	-	<0.05	0.5	1.16	4.24	0.69	1.13	<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	45.9	-	56.3	-	-	60.6	-
QLD_0861_PFASOMP_23	SW080	0861_SW080_231129	29 Nov 2023	EB2337879-AA	0.31	0.25	1.74	0.14	3.45	-	<0.02	<0.1	0.18	0.34	0.07	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	5.19	-	6.23	-	-	6.62	-
QLD_0861_PFASOMP_24	SW080	0861_SW080_240418	18 Apr 2024	EB2413910	2.97	3.29	24.8	1.32	27.8	-	<0.11	<0.5	1.29	4.99	0.66	1.26	<0.11	<0.11	<0.11	<0.11	<0.11	<0.26	<0.11	<0.11	<0.11	<0.11	<0.11	<0.26	<0.11	<0.26	<0.26	<0.11	<0.26	52.6	-	63.8	-	-	68.4	-
QLD_0861_PFAS	SW088	0861_SW088_170915	15 Sep 2017	EB1719132	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW088	0861_SW088_200420	20 Apr 2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW088	0861_SW088_201013	13 Oct 2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.40	<0.30	<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	<0.02	-	<0.02	-	-	<0.02	-
QLD_0861_PFASOMP	SW088	0861_SW088_210413	13 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW088	0861_SW088_211020	20 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW088	0861_QC175_220331	31 Mar 2022	EB2209942	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW088	0861_QC275_220331	31 Mar 2022	RN1349008	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP	SW088	0861_SW088_220331	31 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW088	0861_SW088_221019	19 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW088	0861_SW088_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW088	0861_SW088_231023	23 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW088	0861_SW088_240410	10 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW089	0861_SW089_170914	14 Sep 2017	EB1719065	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW089	0861_SW089_190510	10 May 2019	EB1911952	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW089	0861_SW089_190510	10 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW089	0861_SW089_200420	20 Apr 2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW089	0861_SW089_210413	13 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW089	0861_SW089_211020	20 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW089	0861_SW089_220331	31 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW089	0861_SW089_221019	19 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW089	0861_SW089_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW089	0861_SW089_231023	23 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW089	0861_SW089_240410	10 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW090	0861_SW090_170914	14 Sep 2017	EB1719065	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW090	0861_QC101_190510	10 May 2019	EB1911952	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW090	0861_QC201_190510	10 May 2019	217521	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	-	-	-	-	<0.01	-
QLD_0861_PFAS	SW090	0861_SW90_190510	10 May 2019	EB1911952	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	-	-	-	<0.01	-
QLD_0861_PFAS	SW090	0861_SW90_190510	10 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP	SW090	0861_SW090_200420	20 Apr 2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-

TABLE A4: Surface Water Analytical Summary

Project ID	Location Code	Field ID	Date	Lab Report Number	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	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)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorooctadecanoic acid (PFODA)	Sum of PFAS	8:2 diPAP (678-41-1)
					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							PFAS						
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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					0.001	0.001	0.001	0.001	0.001	0.01	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.005	0.001	0.001	0.001	0.001	0.002	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.02	0.05	0.002	0.02
PFAS NEMP 2020 Drinking Water																0.56																		0.07						
PFAS NEMP 2020 Freshwater 95%									0.13							220																								
PFAS NEMP 2020 Freshwater 99%									0.00023							19																								
PFAS NEMP 2020 Recreational Water																10																		2						
QLD_0861_PFASOMP	SW090	0861_SW090_201013	13 Oct 2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.20	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW090	0861_SW090_210414	14 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW090	0861_SW090_211021	21 Oct 2021	EB2130850	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW090	0861_SW090_220331	31 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW090	0861_SW090_221021	21 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW090	0861_QC112_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW090	0861_SW090_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW090	0861_SW090_231023	23 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW090	0861_SW090_240410	10 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW091	0861_SW091_170914	14 Sep 2017	EB1719065	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW091	0861_SW091_200420	20 Apr 2020	EB2011246-AC	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW091	0861_SW091_210414	14 Apr 2021	EB2111121	<0.02	<0.02	<0.02	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW091	0861_SW091_211021	21 Oct 2021	EB2130835	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW091	0861_SW091_220331	31 Mar 2022	EB2209950	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP	SW091	0861_SW091_221021	21 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW091	0861_SW091_230522	22 May 2023	EB2315514	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_24	SW091	0861_SW091_240410	10 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW094	0861_SW094_170915	15 Sep 2017	EB1719132	**0.10**	**0.10**	**0.56**	<0.02	**0.39**	-	<0.02	<0.1	<0.02	**0.24**	**0.05**	**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	**0.95**	-	**1.41**	-	-	**1.51**	-
QLD_0861_PFASOMP	SW094	0861_SW094_200415	15 Apr 2020	EB2010666-AE	**0.11**	**0.10**	**0.90**	**0.03**	**0.98**	-	<0.02	**0.12**	**0.18**	**0.31**	**0.08**	**0.09**	<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	**1.88**	-	**2.86**	-	-	**2.99**	-
QLD_0861_PFASOMP	SW094	0861_SW094_201014	14 Oct 2020	EB2027176-AA	<0.02	<0.02	**0.06**	<0.02	**0.10**	-	<0.02	<0.10	**0.03**	**0.03**	**0.02**	**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	**0.16**	-	**0.25**	-	-	**0.25**	-
QLD_0861_PFASOMP	SW094	0861_SW094_210414	14 Apr 2021	EB2111121	**0.11**	**0.12**	**0.65**	**0.03**	**0.82**	-	<0.02	**0.2**	**0.36**	**0.30**	**0.11**	**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	**1.47**	-	**2.65**	-	-	**2.80**	-
QLD_0861_PFASOMP	SW094	0861_SW094_211022	22 Oct 2021	EB2130835	**0.02**	<0.02	**0.12**	<0.02	**0.21**	-	<0.02	<0.1	**0.03**	**0.05**	<0.02	**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	**0.33**	-	**0.44**	-	-	**0.44**	-
QLD_0861_PFASOMP	SW094	0861_SW094_220401	01 Apr 2022	EB2209950	**0.19**	**0.18**	**1.03**	**0.05**	**1.24**	-	<0.02	<0.1	**0.23**	**0.40**	**0.10**	**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	**2.27**	-	**3.31**	-	-	**3.54**	-
QLD_0861_PFASOMP	SW094	0861_SW094_221019	19 Oct 2022	EB2231197	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW094	0861_SW094_230522	22 May 2023	EB2315514	<0.02	<0.02	**0.08**	<0.02	**0.13**	-	<0.02	<0.1	**0.02**	**0.03**	<0.02	<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	**0.21**	-	**0.26**	-	-	**0.26**	-
QLD_0861_PFASOMP_23	SW094	0861_SW094_231024	24 Oct 2023	EB2333887-AA	<0.02	<0.02	**0.05**	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.10**	-	**0.10**	-	-	**0.10**	-
QLD_0861_PFASOMP_24	SW094	0861_SW094_240411	11 Apr 2024	EB2413910	<0.02	<0.02	**0.02**	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFAS	SW098	0861_SW098_170915	15 Sep 2017	EB1719132	<0.02	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFAS	SW098	0861_SW098_190506	06 May 2019	EB1911952	<0.02	**0.03**	**0.27**	<0.02	**0.32**	-	<0.02	<0.1	**0.14**	**0.14**	**0.04**	**0.03**	<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	<0.05	<0.02	<0.05	**0.59**	-	**1.09**	-	-	**1.12**	-
QLD_0861_PFAS	SW098	0861_SW098_190506	06 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW098	0861_SW098_191120	20 Nov 2019	EB1931427	**0.04**	**0.03**	**0.29**	<0.02	**0.45**	-	<0.02	<0.1	**0.11**	**0.18**	**0.07**	**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	**0.74**	-	**1.17**	-	-	**1.20**	-
QLD_0861_PFASOMP	SW098	0861_SW098_200415	15 Apr 2020	EB2010666-AF	<0.02	<0.02	**0.02**	<0.02	**0.07**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.09**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFASOMP	SW098	0861_SW098_201015	15 Oct 2020	EB2027208-AA	**0.04**	**0.04**	**0.30**	<0.02	**0.42**	-	<0.02	**0.12**	**0.15**	**0.16**	**0.05**	**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	**0.72**	-	**1.28**	-	-	**1.32**	-
QLD_0861_PFASOMP	SW098	0861_SW098_210415	15 Apr 2021	EB2111112	<0.02	<0.02	<0.02	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	SW098	0861_SW098_211019	19 Oct 2021	EB2130815	<0.02	<0.02	**0.06**	<0.02	**0.10**	-	<0.02	<0.1	**0.02**	**0.03**	<0.02	<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	**0.16**	-	**0.21**	-	-	**0.21**	-
QLD_0861_PFASOMP	SW098	0861_SW098_220401	01 Apr 2022	EB2209946	<0.02	<0.02	<0.01	<0.02	**0.02**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	SW098	0861_SW098_221020	20 Oct 2022	EB2231202	**0.03**	**0.02**	**0.18**	<0.02	**0.25**	-	<0.02	<0.1	**0.02**	**0.07**	<0.02	**0.02**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.43**	-	**0.57**	-	-	**0.59**	-
QLD_0861_PFASOMP_23	SW098	0861_QC102_230418	18 Apr 2023	EB2312062-AB	<0.02	<0.02	**0.04**	<0.02	**0.11**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.15**	-	**0.15**	-	-	**0.15**	-
QLD_0861_PFASOMP_23	SW098	0861_QC202_230418	18 Apr 2023	RN1393124	<0.01	<0.01	**0.033**	<0.01	**0.077**	<0.01	<0.01	<0.05	<0.02	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.05	<0.02	<0.01	<0.05	-	<0.01	-	<0.02	<0.05	-	<0.02
QLD_0861_PFASOMP_23	SW098	0861_SW098_230418	18 Apr 2023	EB2312057	<0.02	<0.02	**0.05**	<0.02	**0.12**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.17**	-	**0.17**	-	-	**0.17**	-
QLD_0861_PFASOMP_23	SW098	0861_SW098_231026	26 Oct 2023	EB2333898	**0.03**	**0.03**	**0.20**	<0.02	**0.34**	-	<0.02	<0.2	**0.05**	**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	**0.54**	-	**0.70**	-	-	**0.73**	-
QLD_0861_PFASOMP_24	SW098	0861_SW098_240412	12 Apr 2024	EB2413946	<0.02	<0.02	<0.01	<0.02	<0.02	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW099	0861_SW099_170915	15 Sep 2017	EB1719132	<0.02	<0.02	**0.05**	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.09**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFAS	SW099	0861_SW099_190507	07 May 2019	EB1911952	<0.02	<0.02	**0.03**	<0.02	<0.01	-	<0.02	<0.1	<0.02	**0.02**	<0.02	<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	**0.03**	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFAS	SW099	0861_SW099_190507	07 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW099	0861_SW099_191127	27 Nov 2019	EB1932183	<0.02	<0.02	**0.02**	<0.02	**0.08**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.10**	-	**0.10**	-	-	**0.10**	-
QLD_0861_PFASOMP	SW099	0861_SW099_200421	21 Apr 2020	EB2011246-AC	<0.02	<0.02	**0.03**	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.09**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFASOMP	SW099	0861_SW099_201015	15 Oct 2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	**0.04**	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	**0.04**	-	**0.04**	-	-	**0.04**	-
QLD_0861_PFASOMP	SW099	0861_SW099_210413	13 Apr 2021	EB2111121	<0.02	<0.02	**0.02**	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP	SW099	0861_SW099_211020	20 Oct 2021	EB2130835	<0.02	<0.02	**0.01**	<0.02	**0.01**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFASOMP	SW099	0861_SW099_220329	29 Mar 2022	EB2209951	<0.02	<0.02	**0.02**	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	SW099	0861_SW099_221020	20 Oct 2022	EB2231197	<0.02	<0.02	**0.04**	<0.02	**0.08**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.12**	-	**0.12**	-	-	**0.12**	-
QLD_0861_PFASOMP_23	SW099	0861_SW099_230419	19 Apr 2023	EB2312062-AA	<0.02	<0.02	<0.02	<0.02	<0.05	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.02	-	<0.01	-	-	<0.01	-
QLD_0861_PFASOMP_23	SW099	0861_SW099_231024	24 Oct 2023	EB2333887-AA	<0.02	<0.02	<0.02	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.05**	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFASOMP_24	SW099	0861_SW099_240411	11 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-
QLD_0861_PFAS	SW100	0861_SW100_170918	18 Sep 2017	EB1719278	<0.02	<0.02	**0.07**	<0.02	**0.07**	-	<0.02	<0.1	**0.09**	**0.04**	<0.02	**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	**0.14**	-	**0.28**	-	-	**0.28**	-
QLD_0861_PFAS	SW100	0861_QC102_190507	07 May 2019	EB1911952	<0.02	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFAS	SW100	0861_QC202_190507	07 May 2019	217521	<0.01	<0.01	**0.02**	<0.01	**0.06**	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**0.08**	-	-	-	-	**0.08**	-
QLD_0861_PFAS	SW100	0861_SW100_190507	07 May 2019	EB1911952	<0.02	<0.02	**0.02**	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.02**	-	**0.02**	-	-	**0.02**	-
QLD_0861_PFAS	SW100	0861_SW100_190507	07 May 2019	EB1914010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SW100	0861_QC203_191127	27 Nov 2019	232094-A	<0.01	<0.01	**0.02**	<0.01	**0.07**	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	**0.09**	-	-	-	-	**0.09**	-
QLD_0861_PFAS	SW100	0861_SW100_191127	27 Nov 2019	EB1932183	<0.02	<0.02	<0.02	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFAS	SW100	QC103_191127	27 Nov 2019	EB1934177	<0.02	<0.02	<0.02	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	SW100	0861_SW100_200421	21 Apr 2020	EB2011246-AC	<0.02	<0.02	**0.02**	<0.02	**0.05**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.07**	-	**0.07**	-	-	**0.07**	-
QLD_0861_PFASOMP	SW100	0861_SW100_201016	16 Oct 2020	EB2027176-AA	<0.02	<0.02	<0.02	<0.02	**0.03**	-	<0.02	<0.10	<0.02	<0.02	<0.02	<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	**0.03**	-	**0.03**	-	-	**0.03**	-
QLD_0861_PFASOMP	SW100	0861_SW100_210413	13 Apr 2021	EB2111121	<0.02	<0.02	**0.02**	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.06**	-	**0.06**	-	-	**0.06**	-
QLD_0861_PFASOMP	SW100	0861_SW100_211020	20 Oct 2021	EB2130835	<0.02	<0.02	**0.02**	<0.02	**0.03**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.05**	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFASOMP	SW100	0861_SW100_220329	29 Mar 2022	EB2209951	<0.02	<0.02	**0.02**	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.08**	-	**0.08**	-	-	**0.08**	-
QLD_0861_PFASOMP	SW100	0861_SW100_221020	20 Oct 2022	EB2231197	<0.02	<0.02	**0.03**	<0.02	**0.06**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.09**	-	**0.09**	-	-	**0.09**	-
QLD_0861_PFASOMP_23	SW100	0861_SW100_230419	19 Apr 2023	EB2312062-AA	**0.04**	<0.02	**0.14**	<0.02	**0.14**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	**0.28**	-	**0.32**	-	-	**0.32**	-
QLD_0861_PFASOMP_23	SW100	0861_SW100_231024	24 Oct 2023	EB2333887-AB	<0.02	<0.02	**0.01**	<0.02	**0.04**	-	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.10	<0.02	<0.05	<0.10	<0.02	<0.05	**0.05**	-	**0.05**	-	-	**0.05**	-
QLD_0861_PFASOMP_24	SW100	0861_SW100_240411	11 Apr 2024	EB2413910	<0.02	<0.02	<0.01	<0.02	<0.01	-	<0.02	<0.1	<0.02	<0.02	<0.02	<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	<0.01	-	<0.01	-	-	<0.01	-

Environmental Standards

HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 95%
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

TABLE A5: Sediment Observations

Location ID	Sample Date	Location	Sample Description	Odour	Notes on River Conditions
SD002	10/04/2024	Drain	Dark brown clay with roots.	No odour	Manmade drainage channel around 10m width, running west to east. Water is shallow, ~0.1m depth, pooled, clear with bright green algae and aquatic plants. Long grass in channel. Sediment slug to the east of the culvert.
SD002	27/10/2023	Drain	Sandy Clay, dark brown.	No odour	Manmade drainage channel around 10m width, running west to east. Water is shallow, ~0.1m depth, pooled, clear with bright green algae and aquatic plants. Long grass in channel. Sediment slug to the east of the culvert.
SD003	10/04/2024	Drain	Pale brown Gravel. Gravel is fine.	No odour	Wide and deep drainage channel, draining north west from the airstrip. Around 40m width and 10m depth. Steep eroded bank to the south west. Heavily vegetated channel with grass, reeds and trees. Reenforced north east bank with large angular boulders.
SD003	27/10/2023	Drain	Sandy Clay, light brown.	No odour	Wide and deep drainage channel, draining north west from the airstrip. Around 40m width and 10m depth. Steep eroded bank to the south west. Heavily vegetated channel with grass, reeds and trees. Reenforced north east bank with large angular boulders.
SD004	9/04/2024	Warrill Creek	Dark brown and grey Clay with rootlets.	Organic odour	Abundant woody debris in river channel. Eroded southern bank. Brown, flowing water, around 0.5m depth. Flowing west to east. Evidence of flooding (stacked debris).
SD004	25/10/2023	Warrill Creek	Sandy Gravel, light brown.	No odour	Abundant woody debris in river channel. Eroded southern bank. Brown, flowing water, around 0.5m depth. Flowing west to east. Evidence of flooding (stacked debris).
SD005	9/04/2024	Warrill Creek	Brown Clay, rootlets.	Organic odour	Brown, flowing water (west to east). Appears to be around 0.5m maximum depth. Clear, brown water with fish present. Established riparian vegetation on north bank. Steep eroded southern bank with no riparian vegetation, followed by grassed floodplain to the south. Woody debris within river channel.
SD005	25/10/2023	Warrill Creek	Silty Clay, dark grey, low plasticity with some fine grained sand.	Organic odour	Brown, flowing water (west to east). Appears to be around 0.5m maximum depth. Clear, brown water with fish present. Established riparian vegetation on north bank. Steep eroded southern bank with no riparian vegetation, followed by grassed floodplain to the south. Woody debris within river channel.
SD008	12/04/2024	Drain	Dark brown Silt.	Organic odour	Still, pooled water with gently sloping grassed banks. Reeds and grass within channel. Flows west to east. Maximum 1m depth. Maximum 5m width.
SD008	25/10/2023	Drain	Sandy Silty Clay, grey brown.	Organic odour	Still, pooled water with gently sloping grassed banks. Reeds and grass within channel. Flows west to east. Maximum 1m depth. Maximum 5m width.
SD009	12/04/2024	Warrill Creek	Brown sandy Clay. Sand is fine.	No odour	Flowing, west to east, slightly cloudy, brown water. Around 1m depth, and around 10m width. Vegetated sediment island within creek with established trees and grasses. Woody debris within channel. Fish present. Southern bank issteep and eroded with no vegetation. North bank is gradually sloping.
SD009	25/10/2023	Warrill Creek	Sand, brown grey	Organic odour	Flowing, west to east, slightly cloudy, brown water. Around 1m depth, and around 10m width. Vegetated sediment island within creek with established trees and grasses. Woody debris within channel. Fish present. Southern bank issteep and eroded with no vegetation. North bank
SD011	9/04/2024	Drain	Light brown sandy Clay.	Organic odour	Shallow, slowly flowing drainage channel. <40cm maximum depth. No riparian vegetation. Grassed banks. Cobble reenforcement of banks. Aquatic plants in drain.
SD011	24/10/2023	Drain	Sandy Clay, grey.	Organic odour	Shallow, slowly flowing drainage channel. <40cm maximum depth. No riparian vegetation. Grassed banks. Cobble reenforcement of banks. Aquatic plants in drain.
SD015	9/04/2024	Warrill Creek	Dark brown sandy Clay with rootlets.	Organic odour	Gently flowing west to east. Slightly cloudy water. ~0.3m depth. Heavily vegetated on north bank with established trees and native grasses. Gently sloping north bank. South bank is steep with visible erosion and less vegetation.
SD015	25/10/2023	Warrill Creek	Sandy Gravel, light brown.	Organic odour	Gently flowing west to east. Slightly cloudy water. ~0.3m depth. Heavily vegetated on north bank with established trees and native grasses. Gently sloping north bank. South bank is steep with visible erosion and less vegetation.
SD016	9/04/2024	Warrill Creek	Dark brown sandy Clay with rootlets.	Organic odour	Still, clear water, brown in colour. Established riparian vegetation on north bank. Woody debris within channel. Fish observed in creek. Rubbish filled embankment ~20m north consists of concrete slabs, construction material, steel debris.
SD016	25/10/2023	Warrill Creek	Sandy Clay, light brown with some gravel.	Organic odour	Still, clear water, brown in colour. Established riparian vegetation on north bank. Woody debris within channel. Fish observed in creek. Rubbish filled embankment ~20m north consists of concrete slabs, construction material, steel debris.
SD018	9/04/2024	Drain entering Warrill Creek	Dark brown gravelly Sand.	No odour	Clear, gently flowing water W to E. Approximately 0.3m depth. Wood debris in river channel. Large angular cobbles in channel (~30 cm). Well vegetated on both banks. Creek bed contains native grass vegetation. Lots of rubbish observed, including bottles, concrete, metal, and asbestos. Construction rubble in creek channel.
SD018	25/10/2023	Drain entering Warrill Creek	Gravelly Sand, brown with trace of clay.	No odour	Clear, gently flowing water W to E. Approximately 0.3m depth. Wood debris in river channel. Large angular cobbles in channel (~30 cm). Well vegetated on both banks. Creek bed contains native grass vegetation. Lots of rubbish observed, including bottles, concrete, metal, and asbestos. Construction rubble in creek channel.
SD020	9/04/2024	Warrill Creek	Dark brown Clay with rootlets.	Organic odour	Clear, still water. Heavily vegetated riparian banks to the north and south. Water gently flowing west to east. Water depth maximum 0.3m. Evidence of flooding (debris in trees).
SD020	25/10/2023	Warrill Creek	Sand, light brown.	No odour	Clear, still water. Heavily vegetated riparian banks to the north and south. Water gently flowing west to east. Water depth maximum 0.3m. Evidence of flooding (debris in trees).
SD021	10/04/2024	Drain	Brown clayey Sand.	Organic odour	Shallow, pooled, still water around 0.2m maximum depth. Thick grass and vegetation surrounding sample location.
SD021	23/10/2023	Drain	Clay, light brown.	No odour	Shallow, pooled, still water around 0.2m maximum depth. Thick grass and vegetation surrounding sample location.
SD025	12/04/2024	Bremer River	Brown sandy Clay. Sand is fine.	No odour	Still pooled water. Flow direction south to north evidenced by debris build up. Black water with small aquatic surface water plants. Depth >1m, width ~20m. Sparcely vegetated banks. Gradual sloping banks (<10°), with steep drop at waters edge.
SD025	26/10/2023	Bremer River	Sandy Gravel, brown and black.	Organic odour	Still pooled water. Flow direction south to north evidenced by debris build up. Black water with small aquatic surface water plants. Depth >1m, width ~20m. Sparcely vegetated banks. Gradual sloping banks (<10°), with steep drop at waters edge.
SD026	11/04/2024	Warrill Creek	Dark brown Clay with fine sand.	Organic odour	Still, pooled, deep water. Very narrow channel, around 2m width. Heavily vegetated banks with native grasses and well established trees. Steep banks. Woody debris within and across the channel. Flow direction south to north.
SD026	24/10/2023	Warrill Creek	Silty Clay, dark brown with organic matter.	Organic odour	Still, pooled, deep water. Very narrow channel, around 2m width. Heavily vegetated banks with native grasses and well established trees. Steep banks. Woody debris within and across the channel. Flow direction south to north.
SD027	9/04/2024	Drain	Brown gravelly Sand.	No odour	Heavily modified creek bed. Vegetated with reeds and trees. Flow direction east to west. Manmade cobble embankment to the south. Grassed, eroding bank to the north.
SD027	24/10/2023	Drain	Clay.	No odour	Heavily modified creek bed. Vegetated with reeds and trees. Flow direction east to west. Manmade cobble embankment to the south. Grassed, eroding bank to the north.
SD028	9/04/2024	Frogs Hollow Gully (Drain)	Brown clayey Sand with rootlets.	Sulfuric odour	Pooled water channel with aquatic plants on the surface. Fish and tadpoles present. Long grass surrounding the channel (~1m high). No riparian vegetation. Relatively flat catchment (<5°) surrounding the channel. Water is black. Unable to see the bottom. Channel is ~ 2m width, and around 0.5m maximum depth. Appears to flow west to east.
SD028	25/10/2023	Frogs Hollow Gully (Drain)	Sandy Clay, brown grey.	Organic odour	Pooled water channel with aquatic plants on the surface. Fish and tadpoles present. Long grass surrounding the channel (~1m high). No riparian vegetation. Relatively flat catchment (<5°) surrounding the channel. Water is black. Unable to see the bottom. Channel is ~ 2m width, and around 0.5m maximum depth. Appears to flow west to east.
SD030	9/04/2024	Drain	Dark brown Clay.	Organic odour	Drain beside road. Flat land surrounding. Manmade banks. No riparian vegetation. Grassed mown banks.
SD030	24/10/2023	Drain	Silt, light brown.	Organic odour	Drain beside road. Flat land surrounding. Manmade banks. No riparian vegetation. Grassed mown banks.
SD033	19/04/2024	Drain	Dark brown and orange mottle silty Clay.	No odour	Gently flowing east to west. Man made channel capturing runoff from training area and release from new water treatment tanks. Ponds immediatley adjacent to the south. Currently empty. Channel bed contains large angular cobbles and reenforcement wire.
SD033	30/10/2023	Drain	Clay , dark brown with trace of sand.	No odour	Gently flowing east to west. Man made channel capturing runoff from training area and release from new water treatment tanks. Ponds immediatley adjacent to the south. Currently empty. Channel bed contains large angular cobbles and reenforcement wire.
SD034	9/04/2024	Warrill Creek	Dark brown sandy Clay.	No odour	Still brown water ~0.3m depth. Heavily vegetated riparian zones on both banks. Native grasses within channel. Rubbish observed in northern bank, including porcelain, glass, and rubber. Narrow drainage channel entering creek from the north to south at sample location.
SD034	25/10/2023	Warrill Creek	Sandy Gravel, brown.	No odour	Still brown water ~0.3m depth. Heavily vegetated riparian zones on both banks. Native grasses within channel. Rubbish observed in northern bank, including porcelain, glass, and rubber. Narrow drainage channel entering creek from the north to south at sample location.
SD036	11/04/2024	Bremer River	Brown sandy Clay. Sand is fine.	Organic odour	Pooled deep water in channel. Unable to see the bottom. Large established gums and trees in channel. Aquatic plants covering entire surface. Western bank vegetated with grass and trees. Eastern bank is gently sloping, vegetated with native grasses. Channel is within a regeneration area.
SD036	24/10/2023	Bremer River	Clay, dark grey, slightly sandy with organic matter.	No odour	Pooled deep water in channel. Unable to see the bottom. Large established gums and trees in channel. Aquatic plants covering entire surface. Western bank vegetated with grass and trees. Eastern bank is gently sloping, vegetated with native grasses. Channel is within a regeneration area.
SD037	10/04/2024	Drain	Grey Silt with rootlets.	No odour	Minimal water <0.1m depth. Still, pooled, and stagnant water. Very shallow drainage channel with mown grassed banks. Tall reeds around 2m high within channel.
SD037	27/10/2023	Drain	Clay, dark brown.	No odour	Minimal water <0.1m depth. Still, pooled, and stagnant water. Very shallow drainage channel with mown grassed banks. Tall reeds around 2m high within channel.
SD038	18/04/2024	Drain	Dark brown Clay.	Organic odour	Still poolled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area.

TABLE A5: Sediment Observations

Location ID	Sample Date	Location	Sample Description	Odour	Notes on River Conditions
SD038	29/11/2023	Drain	Sandy Clay, dark brown with organic matter (leaf litter).	Organic odour	Still poolled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area.
SD039	12/04/2024	Bremer River	Grey brown clayey Sand. Sand is fine.	No odour	Still pooled water beneath bridge. <0.2m depth. Large subangular boulders and cobbles within channel. Creek bed is vegetated with reeds and grasses and well established trees. Flow direction is S to N evidenced by woody debris within the creek.
SD039	26/10/2023	Bremer River	Clay, grey black with trace of sand.	Organic odour	Still pooled water beneath bridge. <0.2m depth. Large subangular boulders and cobbles within channel. Creek bed is vegetated with reeds and grasses and well established trees. Flow direction is S to N evidenced by woody debris within the creek.
SD040	12/04/2024	Bremer River	Dark brown gravelly Clay.	No odour	Large, deep, still dam, with brown coloured water. Around 20m width. Depth >1m. Heavily vegetated banks on both sides. Well established trees and native grasses on both gently sloping banks. Vegetated bank around 50m width on north side. Drainage channel entering the dam from the NW. Sample taken around 2m upstream of drainage channel.
SD040	26/10/2023	Bremer River	Sandy Gravel, grey brown with organic matter (leaf litter).	Organic odour	Large, deep, still dam, with brown coloured water. Around 20m width. Depth >1m. Heavily vegetated banks on both sides. Well established trees and native grasses on both gently sloping banks. Vegetated bank around 50m width on north side. Drainage channel entering the dam from the NW. Sample taken around 2m upstream of drainage channel.
SD041	12/04/2024	Drain	Brown silitly Sand with organic matter.	No odour	Clear, black, pooled, still water. Maximum 0.3m depth. Channel is heavily vegetated with tall reeds. Large angular boulders within channel.
SD041	24/10/2023	Drain	Silt, light grey and brown with organic matter (leaf litter).	No odour	Clear, black, pooled, still water. Maximum 0.3m depth. Channel is heavily vegetated with tall reeds. Large angular boulders within channel.
SD043	11/04/2024	Warrill Creek	Brown silty Gravel.	No odour	Clear, flowing creek. Flowing south to north. Erosion channels on eastern bank beneath the bridge. Black cracking clays. Banks are well vegetated. Channel is around 5m width.
SD043	26/10/2023	Warrill Creek	Silty Clay, dark grey with some sand.	No odour	Clear, flowing creek. Flowing south to north. Erosion channels on eastern bank beneath the bridge. Black cracking clays. Banks are well vegetated. Channel is around 5m width.
SD045	12/04/2024	Bremer River	Light brown sandy Clay.	No odour	Still, clear, brown water, flowing west to east. Small aquatic plants on surface. Well vegetated banks on both sides with native grasses and trees.Gently sloping banks with a steep drop off next to sampling point. Woody debris along banks.
SD045	26/10/2023	Bremer River	Silty Clay, dark grey with some sand.	No odour	Still, clear, brown water, flowing west to east. Small aquatic plants on surface. Well vegetated banks on both sides with native grasses and trees.Gently sloping banks with a steep drop off next to sampling point. Woody debris along banks.
SD047	11/04/2024	Bremer River	Brown Clay.	Organic odour	Deep pooled water. Very steep bank on the western side. Channel around 40m width. Vegetated island with well established gums and trees within the river channel.
SD047	23/10/2023	Bremer River	Clay, dark brown with sand and organic matter (leaf litter).	Organic odour	Deep pooled water. Very steep bank on the western side. Channel around 40m width. Vegetated island with well established gums and trees within the river channel.
SD048	11/04/2024	Drain	No sediment present.	-	Drainage leads from hangar to the north ~40m. Land slopes to the south west. Mowed grassed area.
SD048	27/10/2023	Drain	Clayey Sand, brown.	No odour	Drainage leads from hangar to the north ~40m. Land slopes to the south west. Mowed grassed area.
SD049	10/04/2024	Drain	Grey brown silty Clay.	Organic odour	Large dam at the bottom of a grassy slope. Around 100m diameter. Deep, still, brown water. Aquatic reeds surrounding the banks. Ducks and fish present. Slopes gently from the east to the west.
SD049	23/10/2023	Drain	Clay, light brown and grey, very soft.	No odour	Large dam at the bottom of a grassy slope. Around 100m diameter. Deep, still, brown water. Aquatic reeds surrounding the banks. Ducks and fish present. Slopes gently from the east to the west.
SD050	11/04/2024	Bremer River	Brown sandy Clay with some fine sand.	No odour	Manmade drainage channel around 10m width, running W to E. Water is still and shallow. Around 0.2m depth. Banks are gently sloping and stabilised with large angular boulders. Aquatic plants within channel.
SD050	24/10/2023	Bremer River	Clay, dark grey.	No odour	Manmade drainage channel around 10m width, running W to E. Water is still and shallow. Around 0.2m depth. Banks are gently sloping and stabilised with large angular boulders. Aquatic plants within channel.
SD051	11/04/2024	Bremer River	Dark brown Clay, rootlets. Some fine sand.	No odour	Deep pooled, still water. Flow direction N to S evidenced by flood debris in trees. Very steep embankment. Channel around 5m width. Green scum covering entire surface. Woody debris within channel. Overland flow across embankments evident with rubbish (corrugated iron) running W to E. Heavily vegetated banks with native grasses, reeds, and trees.
SD051	24/10/2023	Bremer River	Sand with organic matter.	No odour	Deep pooled, still water. Flow direction N to S evidenced by flood debris in trees. Very steep embankment. Channel around 5m width. Green scum covering entire surface. Woody debris within channel. Overland flow across embankments evident with rubbish (corrugated iron) running W to E. Heavily vegetated banks with native grasses, reeds, and trees.
SD052	10/04/2024	Bremer River	Dark brown Clay.	No odour	Still, pooled, deep water. Narrow channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is W to E evidenced by flood debris in trees. Very steep banks.
SD052	23/10/2023	Bremer River	Silty Clay, brown, dry.	No odour	Still, pooled, deep water. Narrow channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is W to E evidenced by flood debris in trees. Very steep banks.
SD053	18/04/2024	Drain	Green Sand, organic matter.	No odour	Manmade drainage channel surrounding the runway. Water flowing south to north. Very shallow. Concrete base with 4 drains entering channel. Green algae in water. Clear. Very gently sloping mown grassed banks.
SD053	29/11/2023	Drain	Clay, dark brown with some sand.	No odour	Manmade drainage channel surrounding the runway. Water flowing south to north. Very shallow. Concrete base with 4 drains entering channel. Green algae in water. Clear. Very gently sloping mown grassed banks.
SD056	9/04/2024	Drain	Brown Clay, roots.	No odour	Flat surrounding land. Very gently sloping banks. Channel is around 2m maximum width. Depth around 0.2m max. Grassed mown banks. Reeds and aquatic plants within channel. Still, pooled water.
SD056	24/10/2023	Drain	Sandy Clay, black.	Organic odour	Flat surrounding land. Very gently sloping banks. Channel is around 2m maximum width. Depth around 0.2m max. Grassed mown banks. Reeds and aquatic plants within channel. Still, pooled water.
SD059	9/04/2024	Drain	Dark brown silty Sand.	Organic odour	Still pooled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area. H37
SD059	27/10/2023	Drain	Clay, dark brown.	No odour	Still pooled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area. H37
SD064	18/04/2024	Drain	Dark brown Clay.	Organic odour	Very shallow, narrow drainage channel bordering the runway. Mown grassed area surrounding sample location.
SD064	29/11/2023	Drain	Clay, dark brown with some sand.	No odour	Very shallow, narrow drainage channel bordering the runway. Mown grassed area surrounding sample location.
SD067	18/04/2024	Drain	Dark brown soft Clay.	No odour	Small drainage channel. Concrete culvert contains dark green water. Culvert is covered with a grill. Very shallow channel. Mown grassed banks. Dry during visit.
SD067	29/11/2023	Drain	Clay, dark brown with some sand.	No odour	Small drainage channel. Concrete culvert contains dark green water. Culvert is covered with a grill. Very shallow channel. Mown grassed banks. Dry during visit.
SD076	9/04/2024	Drain	Dark brown Gravel, rootlets.	Organic odour	Flat surrounding land. Very shallow banks. Channel is around 10m width. Very shallow water flowing E to W (~10cm). Channel vegetated with reeds around 1.5m high
SD076	27/10/2023	Drain	Clay with organic matter.	Organic odour	Flat surrounding land. Very shallow banks. Channel is around 10m width. Very shallow water flowing E to W (~10cm). Channel vegetated with reeds around 1.5m high
SD079	18/04/2024	Drain	Pale brown and green Silt.	No odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Very tall reeds in channel. Green and brown algae in channel. No flow. Shallow. Around 0.2m depth. Very gently sloping mown grassed banks.
SD079	29/11/2023	Drain	Clay, dark brown with sand.	Organic odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Very tall reeds in channel. Green and brown algae in channel. No flow. Shallow. Around 0.2m depth. Very gently sloping mown grassed banks.
SD080	15/04/2024	Drain	Brown sandy Clay.	No odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Sediment build up on the southern side of the culvert. Very gently sloping mown grassed banks.
SD080	29/11/2023	Drain	Clay, dark brown with sand.	No odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Sediment build up on the southern side of the culvert. Very gently sloping mown grassed banks.
SD088	10/04/2024	Bremer River	Dark brown silty Clay with some fine sand.	No odour	Deep, wide channel. Entire surface is covered with small aquatic plants. Gently sloping vegetated banks. Woody debris within channel. Flow direction is west to east.
SD088	23/10/2023	Bremer River	Clay, dark brown, some fine sand and organic matter.	Organic odour	Deep, wide channel. Entire surface is covered with small aquatic plants. Gently sloping vegetated banks. Woody debris within channel. Flow direction is west to east.
SD089	10/04/2024	Bremer River	Dark brown silty Clay.	No odour	Still, pooled, shallow water. Entire surface is covered with small aquatic plants. Woody debris across channel. Fallen trees across the banks. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD089	23/10/2023	Bremer River	Clay, dark brown, organic matter (leaf litter).	Organic odour	Still, pooled, shallow water. Entire surface is covered with small aquatic plants. Woody debris across channel. Fallen trees across the banks. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.

TABLE A5: Sediment Observations

Location ID	Sample Date	Location	Sample Description	Odour	Notes on River Conditions
SD090	10/04/2024	Bremer River	Dark brown Clay.	No odour	Still, pooled, deep water. Channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD090	23/10/2023	Bremer River	Clay, dark brown, organic matter (leaf litter).	Organic odour	Still, pooled, deep water. Channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD091	10/04/2024	Bremer River	Dark brown Clay.	No odour	Still, pooled, clear water. Small aquatic plants on surface. Woody debris within creek channel. Fallen trees across channel. Channel around 3m width. Water around 0.3m depth. Heavily vegetated banks. Banks are fenced off for regeneration. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD091	23/10/2023	Bremer River	Clay, light brown.	No odour	Still, pooled, clear water. Small aquatic plants on surface. Woody debris within creek channel. Fallen trees across channel. Channel around 3m width. Water around 0.3m depth. Heavily vegetated banks. Banks are fenced off for regeneration. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD094	11/04/2024	Bremer River	Brown Clay.	Organic odour	Shallow, pooled water in creek channel. Not flowing, clear, brown. Large woody debris within channel. Vegetated banks. Steep easterly bank, gently sloping on the west. Western bank is a revegetation area. Flow direction is north to south, evidenced by flood debris within the channel. Drainage channel entering the creek from the northwest to southeast. Heavily eroded.
SD094	24/10/2023	Bremer River	Sandy Clay with organic matter (leaf litter).	Organic odour	Shallow, pooled water in creek channel. Not flowing, clear, brown. Large woody debris within channel. Vegetated banks. Steep easterly bank, gently sloping on the west. Western bank is a revegetation area. Flow direction is north to south, evidenced by flood debris within the channel. Drainage channel entering the creek from the northwest to southeast. Heavily eroded.
SD098	12/04/2024	Bremer River	Brown sandy Clay with some gravel.	No odour	Still pooled water beneath bridge. ~0.5m depth. Clear, with a brown colour. Water flow north to south evidenced by debris build up within creek. Film of white/green substance on water surface. Geofab on embankments. Vegetated banks on both sides with native grass and trees.
SD098	26/10/2023	Bremer River	Clay, grey and black.	Organic odour	Still pooled water beneath bridge. ~0.5m depth. Clear, with a brown colour. Water flow north to south evidenced by debris build up within creek. Film of white/green substance on water surface. Geofab on embankments. Vegetated banks on both sides with native grass and trees.
SD099	11/04/2024	Warrill Creek	Dark brown Clay, rootlets.	Organic odour	Deep, wide channel. Brown, turbid water. Gently flowing south to north. Woody debris along banks. Grassed bank to the west. Vegetated with well established trees to the east.
SD099	24/10/2023	Warrill Creek	Silty Clay, light brown with organic matter.	Organic odour	Deep, wide channel. Brown, turbid water. Gently flowing south to north. Woody debris along banks. Grassed bank to the west. Vegetated with well established trees to the east.
SD100	11/04/2024	Warrill Creek	Dark brown Clay.	Organic odour	Deep, narrow channel, gently flowing east to west. Clear, green/brown colour. Flood debris in trees and on banks. Very steep north bank. Long grass and vegetation on south bank.
SD100	24/10/2023	Warrill Creek	Clayey Silt grey, very soft with organic matter.	Organic odour	Deep, narrow channel, gently flowing east to west. Clear, green/brown colour. Flood debris in trees and on banks. Very steep north bank. Long grass and vegetation on south bank.

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFAS	SD002	0861_SD002_0.4_170913	13 Sep 2017	EB1719017	**29.5**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0015**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD002	0861_SD002_0_170913	13 Sep 2017	EB1719017	**46.7**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0174**	-	**0.0003**	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD002	0861_SD002_0.0_190429	29 Apr 2019	EB1911384	**42.1**	<0.0002	<0.0002	**0.0015**	<0.0002	**0.0080**	-	<0.0002	<0.001	**0.0062**	**0.0087**	**0.0020**	**0.0006**	<0.0002	**0.0004**	**0.0005**	**0.0004**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD002	0861_SD002_200415	15 Apr 2020	EB2010666-AE	**47.8**	<0.0005	<0.0005	**0.0013**	<0.0005	**0.0074**	-	<0.0005	<0.001	**0.0009**	**0.0011**	**0.0008**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD002	0861_SD002_201016	16 Oct 2020	EB2027176-AA	**6.1**	<0.0005	<0.0005	**0.0019**	<0.0005	**0.0144**	-	**0.0008**	<0.002	**0.0031**	**0.0033**	**0.0019**	**0.0008**	**0.0010**	**0.0015**	**0.0026**	**0.0025**	**0.0006**	<0.0013
QLD_0861_PFASOMP	SD002	0861_SD002_210330	30 Mar 2021	EB2108857	**26.8**	<0.0005	<0.0005	**0.0006**	<0.0005	**0.0080**	-	**0.0011**	<0.002	**0.0010**	**0.0008**	**0.0008**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD002	0861_SD002_211025	25 Oct 2021	EB2130835	**48.0**	<0.0002	<0.0002	**0.0027**	<0.0002	**0.0407**	-	**0.0018**	<0.001	**0.0024**	**0.0021**	**0.0018**	**0.0009**	**0.0012**	**0.0016**	**0.0022**	**0.0023**	**0.0006**	<0.0006
QLD_0861_PFASOMP	SD002	0861_QC167_220328	28 Mar 2022	EB2209942	**41.0**	<0.0002	<0.0002	**0.0010**	<0.0002	**0.0125**	-	<0.0002	<0.001	**0.0005**	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	**0.0005**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD002	0861_QC267_220328	28 Mar 2022	RN1349008	-	<0.001	<0.001	**0.0014**	<0.001	**0.018**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD002	0861_SD002_220328	28 Mar 2022	EB2209950	**47.7**	<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
QLD_0861_PFASOMP	SD002	0861_SD002_221021	21 Oct 2022	EB2231197	**45.8**	<0.0002	<0.0002	**0.0009**	<0.0002	**0.0139**	-	**0.0008**	<0.001	**0.0002**	**0.0004**	<0.0002	**0.0002**	<0.0002	**0.0002**	**0.0006**	**0.0009**	**0.0003**	<0.0005
QLD_0861_PFASOMP_23	SD002	0861_SD002_230418	18 Apr 2023	EB2312062-AA	**33.3**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0133**	-	**0.0003**	<0.001	**0.0004**	**0.0004**	<0.0002	<0.0002	**0.0003**	**0.0005**	**0.0007**	**0.0008**	**0.0003**	<0.0005
QLD_0861_PFASOMP_23	SD002	0861_SD002_231027	27 Oct 2023	EB2333894-AA	**29.1**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0038**	-	<0.0002	<0.001	**0.0002**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD002	0861_SD002_240410	10 Apr 2024	EB2413910	**47.0**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0090**	-	<0.0002	<0.001	**0.0003**	**0.0005**	**0.0003**	**0.0004**	**0.0002**	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0005
QLD_0861_PFAS	SD003	0861_SD003_0.1_170913	13 Sep 2017	EB1719017	**26.7**	<0.0002	<0.0002	**0.0017**	**0.0002**	**0.0418**	-	**0.0005**	<0.001	**0.0004**	**0.0010**	**0.0007**	**0.0013**	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD003	0861_SD003_0_170913	13 Sep 2017	EB1719017	**13.4**	<0.0002	<0.0002	**0.0013**	<0.0002	**0.0186**	-	**0.0011**	<0.001	**0.0012**	**0.0016**	**0.0006**	**0.0005**	**0.0003**	**0.0007**	**0.0010**	**0.0008**	<0.0002	<0.0005
QLD_0861_PFAS	SD003	0861_SD003_0.0_190429	29 Apr 2019	EB1911384	**58.1**	**0.0006**	**0.0006**	**0.0060**	**0.0007**	**0.0757**	-	**0.0020**	<0.001	**0.0009**	**0.0018**	**0.0004**	**0.0011**	**0.0003**	**0.0005**	**0.0011**	**0.0012**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD003	0861_SD003_200415	15 Apr 2020	EB2010666-AE	**6.0**	**0.0006**	<0.0005	**0.0039**	<0.0005	**0.0295**	-	<0.0005	<0.001	**0.0016**	**0.0026**	**0.0007**	**0.0005**	**0.0006**	<0.0005	**0.0008**	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD003	0861_SD003_201016	16 Oct 2020	EB2027176-AA	**5.8**	**0.0007**	**0.0008**	**0.0060**	<0.0005	**0.0304**	-	**0.0012**	<0.002	**0.0040**	**0.0046**	**0.0015**	**0.0008**	**0.0005**	**0.0007**	**0.0010**	**0.0009**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD003	0861_SD003_210330	30 Mar 2021	EB2108857	**37.7**	<0.0005	<0.0005	**0.0023**	<0.0005	**0.0092**	-	<0.0005	<0.002	**0.0006**	**0.0011**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013
QLD_0861_PFASOMP	SD003	0861_SD003_211022	22 Oct 2021	EB2130835	**38.0**	<0.0002	<0.0002	**0.0013**	<0.0002	**0.0284**	-	**0.0016**	<0.001	**0.0010**	**0.0010**	**0.0005**	**0.0005**	**0.0006**	**0.0009**	**0.0008**	**0.0005**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD003	0861_SD003_220328	28 Mar 2022	EB2209950	**28.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD003	0861_SD003_221021	21 Oct 2022	EB2231197	**28.6**	<0.0002	<0.0002	**0.0046**	**0.0003**	**0.0268**	-	**0.0005**	<0.001	**0.0021**	**0.0020**	**0.0016**	**0.0026**	**0.0007**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD003	0861_SD003_230418	18 Apr 2023	EB2312062-AA	**46.9**	**0.0002**	**0.0002**	**0.0027**	**0.0003**	**0.0268**	-	**0.0004**	<0.001	**0.0003**	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0004**	**0.0006**	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD003	0861_SD003_231027	27 Oct 2023	EB2333894-AA	**5.2**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0006**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD003	0861_SD003_240410	10 Apr 2024	EB2413910	**32.4**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0013**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD004	0861_SD04_0.3_170531	31 May 2017	EB1711233	**41.4**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0032**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD004	0861_SD04_0_170531	31 May 2017	EB1711233	**50.7**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0046**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD004	0861_SD004_0.0_190502	02 May 2019	EB1911384	**37.8**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0170**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD004	0861_SD004_0.0_191119	19 Nov 2019	EB1931427	**45.3**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0030**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD004	0861_SD004_200414	14 Apr 2020	EB2010666-AE	**41.8**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0028**	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0006	<0.0012	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD004	0861_SD004_201012	12 Oct 2020	EB2027172	**29.1**	<0.0005	<0.0005	**0.0011**	<0.0005	**0.0047**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD004	0861_SD004_210414	14 Apr 2021	EB2111116	**30.1**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0059**	-	<0.0110	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0002	<0.0005
QLD_0861_PFASOMP	SD004	0861_SD004_211019	19 Oct 2021	EB2130835	**39.9**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0045**	-	**0.0005**	<0.001	**0.0004**	**0.0006**	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD004	0861_SD004_220329	29 Mar 2022	EB2209950	**32.2**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0013**	-	<0.0062	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD004	0861_SD004_221018	18 Oct 2022	EB2231197	**31.0**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0016**	-	<0.0002	<0.001	<0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD004	0861_SD004_230428	28 Apr 2023	EB2312761-AA	**64.5**	<0.0002	<0.0002	<0.0004	<0.0002	**0.0084**	-	<0.107	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD004	0861_SD004_231025	25 Oct 2023	EB2333894-AA	**17.8**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0054**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD004	0861_SD004_240409	09 Apr 2024	EB2413910	**38.2**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0283**	-	<0.0012	<0.001	**0.0006**	**0.0005**	<0.0002	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD005	0861_SD05_0.3_170531	31 May 2017	EB1711233	**49.8**	<0.0002	<0.0002	**0.0121**	**0.0014**	**0.531**	-	**0.0041**	<0.001	<0.0002	**0.0032**	**0.0005**	**0.0013**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD005	0861_SD05_0_170531	31 May 2017	EB1711233	**43.0**	<0.0002	**0.0004**	**0.0071**	**0.0008**	**0.478**	-	**0.0112**	<0.001	<0.0002	**0.0014**	**0.0003**	**0.0007**	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD005	0861_SD005_0.0_190430	30 Apr 2019	EB1911384	**46.3**	**0.0012**	**0.0008**	**0.0111**	**0.0006**	**0.126**	-	<0.0010	<0.001	**0.0007**	**0.0021**	**0.0003**	**0.0009**	<0.0002	<0.0002	<0.0006	<0.0005	<0.0002	<0.0005
QLD_0861_PFAS	SD005	0861_SD005_0.3_190430	30 Apr 2019	EB1911384	**53.5**	**0.0017**	**0.0008**	**0.0122**	**0.0007**	**0.156**	-	<0.0011	<0.001	**0.0006**	**0.0022**	<0.0002	**0.0008**	<0.0002	<0.0002	<0.0007	<0.0005	<0.0002	<0.0005
QLD_0861_PFAS	SD005	0861_SD005_0.0_191118	18 Nov 2019	EB1931427	**56.2**	**0.0002**	<0.0002	**0.0009**	<0.0002	**0.0070**	-	**0.0002**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0006**	<0.0002	<0.0005
QLD_0861_PFAS	SD005	0861_SD005_0.3_191119	19 Nov 2019	EB1931427	**48.2**	**0.0002**	<0.0002	**0.0005**	<0.0002	**0.0064**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD005	0861_SD005_200414	14 Apr 2020	EB2010666-AE	**36.8**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0031**	-	<0.0009	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0008	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD005	0861_SD005_201012	12 Oct 2020	EB2027172	**35.0**	<0.0005	<0.0005	**0.0050**	<0.0005	**0.0348**	-	<0.0005	<0.002	<0.0005	**0.0012**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD005	0861_SD005_210412	12 Apr 2021	EB2111116	**43.4**	<0.0005	<0.0005	**0.0014**	<0.0005	**0.0201**	-	<0.0038	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013
QLD_0861_PFASOMP	SD005	0861_SD005_211019	19 Oct 2021	EB2130835	**43.3**	<0.0006	<0.0005	**0.0012**	<0.0005	**0.0092**	-	<0.0008	<0.002	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD005	0861_SD005_220329	29 Mar 2022	EB2209950	**43.0**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0023**	-	**0.0005**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD005	0861_SD005_221018	18 Oct 2022	EB2231197	**52.0**	<0.0010	<0.0010	**0.0030**	<0.0010	**0.131**	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0026
QLD_0861_PFASOMP	SD005	0861_QC283_221018	18 Oct 2022	RN1370747	-	<0.001	<0.001	**0.0045**	<0.001	**0.12**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD005	0861_SD005_221018	18 Oct 2022	EB2231197	**54.0**	<0.0010	<0.0010	**0.0049**	<0.0010	**0.113**	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP_23	SD005	0861_SD005_230428	28 Apr 2023	EB2312761-AA	**66.3**	**0.0014**	<0.0010	**0.0181**	<0.0022	**0.335**	-	<0.0034	<0.005	<0.0010	**0.0029**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0024
QLD_0861_PFASOMP_23	SD005	0861_SD005_231025	25 Oct 2023	EB2333894-AA	**43.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0030**	-	**0.0003**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD005	0861_SD005_240409	09 Apr 2024	EB2413910	**39.6**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0029**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_Hist_202012-3	SD008	RAAFAmb SED04 0.0-0.1	26 Jul 2012	EB1219768	**51.8**	-	-	-	-	**0.182**	-	-	-	-	-	-	**0.0029**	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	RAAFAmb SED04 0.4-0.5	26 Jul 2012	EB1219768	**59.9**	-	-	-	-	**0.196**	-	-	-	-	-	-	**0.003**	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0.0_121009	09 Oct 2012	EB1226360	**49.3**	-	-	-	-	**0.635**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0.4_121009	09 Oct 2012	EB1226360	**51.6**	-	-	-	-	**0.507**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0.4_130116	16 Jan 2013	EB1301006	**33.3**	-	-	-	-	**0.0549**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0_130116	16 Jan 2013	EB1301006	**31.8**	-	-	-	-	**0.034**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	E0861_SD04_0.4_130809	09 Aug 2013	EB1319281	**38.3**	-	-	-	-	**0.0065**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	E0861_SD04_0_130809	09 Aug 2013	EB1319281	**54.8**	-	-	-	-	**0.0152**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	0861_SED02_170302	02 Mar 2017	EB1704230	**74.3**	**0.0007**	**0.0007**	**0.009**	**0.0008**	**0.118**	-	**0.0007**	**0.001**	**0.0018**	**0.0017**	**0.0009**	**0.003**	**0.0013**	**0.0024**	**0.0019**	**0.0017**	<0.0002	<0.0005
QLD_0861_PFAS	SD008	0861_SD08_0.3_170531	31 May 2017	EB1711233	**31.7**	<0.0002	<0.0002	**0.0011**	<0.0002	**0.0223**	-	**0.0010**	<0.001	<0.0002	**0.0004**	<0.0002	**0.0003**	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD008	0861_SD08_0_170531	31 May 2017	EB1711233	**40.5**	<0.0002	<0.0002	**0.0010**	<0.0002	**0.0266**	-	**0.0006**	<0.001	<0.0002	**0.0005**	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_Hist_202012-3	SD008	0861_SED02_171013	13 Oct 2017	EB1721221	**45.6**	**0.0002**	<0.0002	**0.003**	**0.0003**	**0.0495**	-	**0.0006**	<0.001	<0.0002	**0.0004**	<0.0002	**0.0006**	**0.0002**	**0.0005**	**0.0005**	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD008	0861_SD008_0.0_190502	02 May 2019	EB1911384	**59.5**	<0.0010	<0.0010	**0.0020**	<0.0010	**0.0353**	-	**0.0129**	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	**0.0017**	<0.0025
QLD_0861_PFASOMP	SD008	0861_QC107_200417	17 Apr 2020	EB2010666-AE	**33.4**	<0.0002	<0.0002	**0.0005**	<0.0002	**0.0043**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD008	0861_QC207_200417	17 Apr 2020	RN1271947	-	<0.001	<0.001	**0.0023**	<0.001	**0.028**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD008	0861_QC207_200417	17 Apr 2020	RN1274650	-	<0.001	<0.001	**0.0023**	<0.001	**0.028**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD008	0861_SD008_200417	17 Apr 2020	EB2010666-AE	**39.6**	**0.0003**	**0.0003**	**0.0031**	<0.0002	**0.0277**	-	<0.0002	<0.001	<0.0002	**0.0004**	**0.0004**	**0.0003**	<0.0002	**0.0005**	<0.0006	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD008	0861_SD008_201012	12 Oct 2020	EB2027172	**40.8**	<0.0022	<0.0005	**0.0035**	<0.0005	**0.0469**	-	<0.0005	<0.002	<0.0005	**0.0008**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD008	0861_SD008_210415	15 Apr 2021	EB2111116	**47.1**	<0.0005	<0.0005	**0.0033**	<0.0005	**0.153**	-	**0.0070**	<0.002	<0.0005	**0.0006**	<0.0005	**0.0008**	**0.0009**	**0.0014**	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD008	0861_SD008_211026	26 Oct 2021	EB2130850	**43.6**	<0.0002	**0.0003**	**0.0038**	**0.0005**	**0.105**	-	**0.0045**	<0.001	**0.0005**	**0.0004**	<0.0002	**0.0004**	**0.0003**	**0.0004**	**0.0008**	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP	SD008	0861_SD008_220328	28 Mar 2022	EB2209950	**43.7**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0004**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD008	0861_SD008_221026	26 Oct 2022	EB2231825	**56.0**	<0.0002	<0.0002	**0.0017**	<0.0002	**0.0224**	-	**0.0010**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD008	0861_SD008_230428	28 Apr 2023	EB2312761-AA	**89.8**	<0.0010	<0.0012	**0.0122**	<0.0020	**0.250**	-	<0.0066	<0.001	**0.0011**	**0.0028**	**0.0010**	**0.0026**	**0.0005**	**0.0015**	**0.0015**	**0.0035**	**0.0008**	<0.0006
QLD_0861_PFASOMP_23	SD008	0861_SD008_231025	25 Oct 2023	EB2333894-AA	**59.2**	<0.0002	<0.0002	**0.0016**	<0.0002	**0.0343**	-	**0.0014**	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	**0.0003**	**0.0002**	<0.0005
QLD_0861_PFASOMP_24	SD008	0861_SD008_240412	12 Apr 2024	EB2413910	**42.8**	<0.0003	**0.0003**	**0.0024**	<0.0002	**0.0276**	-	**0.0053**	<0.001	<0.0002	**0.0006**	<0.0002	**0.0003**	<0.0002	<0.0002	**0.0005**	**0.0004**	**0.0007**	<0.0005
QLD_0861_PFAS	SD009	0861_SD09_0.3_170531	31 May 2017	EB1711233	**43.3**	<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
QLD_0861_PFAS	SD009	0861_SD09_0_170531	31 May 2017	EB1711233	**41.0**	<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
QLD_0861_PFAS	SD009	0861_SD009_0.0_190502	02 May 2019	EB1911384	**57.8**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0026**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD009	0861_SD009_200415	15 Apr 2020	EB2010666-AE	**40.3**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0006**	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0008	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD009	0861_SD009_201012	12 Oct 2020	EB2027172	**35.4**	<0.0005	<0.0005	**0.0008**	<0.0005	**0.0044**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP	SD009	0861_SD009_210414	14 Apr 2021	EB2111116	**40.9**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0030**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD009	0861_SD009_211022	22 Oct 2021	EB2130835	**41.0**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0096**	-	<0.0140	<0.001	<0.0002	**0.0003**	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP	SD009	0861_SD009_220329	29 Mar 2022	EB2209950	**50.5**	**0.0007**	**0.0006**	**0.0046**	**0.0005**	**0.0556**	-	**0.0011**	<0.001	<0.0004	**0.0009**	**0.0002**	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD009	0861_SD009_230428	28 Apr 2023	EB2312761-AA	**58.9**	<0.0002	<0.0004	**0.0038**	<0.0010	**0.0687**	-	<0.0606	<0.001	<0.0002	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD009	0861_SD009_231025	25 Oct 2023	EB2333894-AA	**41.6**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0021**	-	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD009	0861_SD009_240412	12 Apr 2024	EB2413910	**34.6**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0061**	-	<0.0007	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_Hist_202012-3	SD011	E0861_SD09_0.4_130822	22 Aug 2013	EB1320352	**25.7**	-	-	-	-	**0.0442**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD011	E0861_SD09_0_130822	22 Aug 2013	EB1320352	**29.4**	-	-	-	-	**0.0473**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_0861_PFAS	SD011	0861_SD011_SD_0.3_170912	13 Sep 2017	EB1718855	**20.6**	<0.0002	<0.0002	**0.0021**	<0.0002	**0.0176**	-	<0.0002	<0.001	<0.0002	**0.0008**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD011	0861_SD011_SD_0_170912	13 Sep 2017	EB1718855	**23.5**	<0.0002	<0.0002	**0.0012**	<0.0002	**0.0166**	-	<0.0002	<0.001	<0.0002	**0.0010**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD011	0861_SD011_0.0_190501	01 May 2019	EB1911384	**62.8**	**0.0012**	**0.0013**	**0.0270**	**0.0023**	**0.367**	-	<0.0002	**0.001**	**0.0036**	**0.0051**	**0.0021**	**0.0021**	**0.0006**	**0.0013**	<0.0020	**0.0031**	**0.0005**	**0.0010**
QLD_0861_PFASOMP	SD011	0861_SD011_200414	14 Apr 2020	EB2010666-AE	**61.5**	<0.0010	<0.0010	**0.0055**	<0.0010	**0.0540**	-	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD011	0861_SD011_201016	16 Oct 2020	EB2027176-AA	**1.4**	**0.0055**	**0.0052**	**0.0424**	**0.0025**	**0.109**	-	<0.0005	<0.027	**0.0537**	**0.0314**	**0.0101**	**0.0063**	**0.0009**	**0.0010**	<0.0005	**0.0007**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD011	0861_SD011_210330	30 Mar 2021	EB2108857	**29.7**	<0.0010	<0.0010	**0.0345**	**0.0031**	**0.747**	-	<0.0010	<0.005	**0.0048**	**0.0044**	**0.0027**	**0.0040**	**0.0033**	**0.0030**	**0.0033**	**0.0033**	<0.0010	<0.0025
QLD_0861_PFASOMP	SD011	0861_SD011_211026	26 Oct 2021	EB2130850	**29.6**	**0.0013**	**0.0008**	**0.0075**	**0.0008**	**0.0731**	-	<0.0008	**0.005**	**0.0140**	**0.0096**	**0.0043**	**0.0016**	**0.0006**	**0.0012**	**0.0017**	**0.0018**	**0.0004**	<0.0006
QLD_0861_PFASOMP	SD011	0861_SD011_220328	28 Mar 2022	EB2209950	**56.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0009**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD011	0861_SD011_230417	17 Apr 2023	EB2312062-AA	**20.6**	<0.0002	<0.0002	**0.0009**	<0.0002	**0.0031**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD011	0861_SD011_231024	24 Oct 2023	EB2333894-AA	**71.6**	<0.0002	<0.0005	**0.0071**	<0.0002	**0.0976**	-	<0.0002	**0.001**	<0.0002	**0.0009**	<0.0002	<0.0010	<0.0002	<0.0010	<0.0010	<0.0010	<0.0010	**0.0006**
QLD_0861_PFASOMP_24	SD011	0861_SD011_240409	09 Apr 2024	EB2413910	**60.8**	<0.0003	**0.0003**	**0.0038**	<0.0002	**0.0369**	-	<0.0002	<0.001	**0.0002**	**0.0009**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	<0.0005
QLD_Hist_202012-3	SD015	RAAF AMB SED106 0.0-0.1	01 Aug 2012	EB1220184	**59.5**	-	-	-	-	**0.363**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	RAAF AMB SED106 0.4-0.5	01 Aug 2012	EB1220184	**61.8**	-	-	-	-	**0.0167**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0.0_121011	11 Oct 2012	EB1226594	**37.4**	-	-	-	-	**0.0095**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0.4_121011	11 Oct 2012	EB1226594	**50.1**	-	-	-	-	**0.0129**	-	-	-	-	-	-	**0.0005**	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_QC1_SD_130117	17 Jan 2013	EB1301006	**53.3**	-	-	-	-	**0.0161**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0.4_130117	17 Jan 2013	EB1301006	**56.3**	-	-	-	-	**0.0348**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0_130117	17 Jan 2013	EB1301006	**53.1**	-	-	-	-	**0.0116**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	QC2	17 Jan 2013	365859	**55**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	E0861_SD106_0.4_130821	21 Aug 2013	EB1320178	**37.7**	-	-	-	-	**0.0205**	-	-	-	-	-	-	**0.0005**	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	E0861_SD106_0_130821	21 Aug 2013	EB1320178	**41.7**	-	-	-	-	**0.001**	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	0861_SED10_170302	02 Mar 2017	EB1704230	**57.9**	<0.001	<0.001	**0.0014**	<0.001	**0.01**	-	<0.001	<0.001	<0.001	**0.0011**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0025
QLD_0861_PFAS	SD015	0861_SD15_0.3_170605	05 Jun 2017	EB1711471	**45.9**	<0.0002	<0.0002	<0.0002	**0.0002**	**0.0049**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD015	0861_SD15_0_170605	05 Jun 2017	EB1711471	**38.9**	<0.0002	<0.0002	<0.0002	**0.0004**	**0.0023**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_Hist_202012-3	SD015	0861_SED10_171016	16 Oct 2017	EB1721395	**39**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0098**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD015	0861_SD015_0.0_190430	30 Apr 2019	EB1911384	**39.3**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0177**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD015	0861_SD015_0.0_191119	19 Nov 2019	EB1931427	**44.4**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0149**	-	**0.0012**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD015	0861_SD015_200414	14 Apr 2020	EB2010666-AE	**47.6**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0013**	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.0006**	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD015	0861_SD015_201012	12 Oct 2020	EB2027172	**40.4**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0010**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD015	0861_SD015_210412	12 Apr 2021	EB2111116	**37.9**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0057**	-	<0.0006	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD015	0861_SD015_211019	19 Oct 2021	EB2130835	**44.8**	<0.0012	<0.0012	<0.0018	<0.0012	<0.0154	-	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0031
QLD_0861_PFASOMP	SD015	0861_SD015_220329	29 Mar 2022	EB2209950	**58.5**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0036**	-	<0.0020	<0.001	**0.0002**	**0.0003**	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD015	0861_SD015_221018	18 Oct 2022	EB2231197	**42.3**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0042**	-	**0.0006**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD015	0861_SD015_230426	26 Apr 2023	EB2312761-AA	**37.2**	<0.0002	<0.0002	**0.0005**	<0.0002	**0.0057**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP_23	SD015	0861_SD015_231025	25 Oct 2023	EB2333894-AA	**44.1**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0069**	-	<0.0003	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD015	0861_SD015_240409	09 Apr 2024	EB2413910	**44.4**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0062**	-	<0.0252	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD016	0861_SD16_0.3_170605	05 Jun 2017	EB1711471	**34.3**	**0.0011**	**0.0005**	**0.0046**	**0.0014**	**0.242**	-	**0.0020**	<0.001	**0.0003**	**0.0025**	**0.0004**	**0.0020**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD016	0861_SD16_0_170605	05 Jun 2017	EB1711471	**52.6**	**0.0020**	**0.0010**	**0.0084**	**0.0046**	**0.580**	-	**0.0053**	<0.001	**0.0012**	**0.0041**	**0.0008**	**0.0028**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD016	0861_SD016_0.0_190430	30 Apr 2019	EB1911384	**72.3**	<0.0013	<0.0002	**0.0012**	**0.0002**	**0.0086**	-	<0.0002	<0.001	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD016	0861_SD016_0.0_191119	19 Nov 2019	EB1931427	**44.0**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0029**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD016	0861_SD016_200414	14 Apr 2020	EB2010666-AE	**53.0**	<0.0010	<0.0010	<0.0010	<0.0010	**0.0040**	-	<0.0010	<0.001	<0.0010	**0.0014**	**0.0011**	<0.0010	<0.0010	<0.0080	<0.0042	<0.0014	<0.0010	<0.0025
QLD_0861_PFASOMP	SD016	0861_SD016_201012	12 Oct 2020	EB2027172	**49.0**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0060	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD016	0861_SD016_210412	12 Apr 2021	EB2111116	**44.5**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0046**	-	<0.0014	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD016	0861_SD016_211019	19 Oct 2021	EB2130835	**43.4**	<0.0005	<0.0005	**0.0024**	<0.0005	**0.0104**	-	<0.0005	<0.002	<0.0005	**0.0008**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD016	0861_SD016_220329	29 Mar 2022	EB2209950	**42.0**	**0.0005**	**0.0006**	**0.0060**	<0.0005	**0.0054**	-	<0.0018	<0.002	**0.0008**	**0.0023**	**0.0006**	**0.0008**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD016	0861_SD016_221018	18 Oct 2022	EB2231197	**45.2**	<0.0002	<0.0002	<0.0004	<0.0002	**0.0061**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD016	0861_SD016_230428	28 Apr 2023	EB2312761-AA	**47.8**	<0.0002	<0.0002	<0.0004	<0.0014	**0.0045**	-	<0.0032	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD016	0861_SD016_231025	25 Oct 2023	EB2333894-AA	**43.4**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0035**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD016	0861_SD016_240409	09 Apr 2024	EB2413910	**60.0**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0024	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD018	0861_SD18_0.3_170601	01 Jun 2017	EB1711387	**34.9**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0030**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD018	0861_SD18_0_170601	01 Jun 2017	EB1711387	**34.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0059**	-	**0.0003**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD018	0861_SD018_0.0_190430	30 Apr 2019	EB1911384	**41.2**	<0.0014	<0.0002	**0.0018**	<0.0002	**0.0190**	-	**0.0003**	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD018	0861_SD018_191119	19 Nov 2019	EB1931427	**27.3**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0035**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD018	0861_SD018_200414	14 Apr 2020	EB2010666-AE	**16.5**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0007**	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD018	0861_SD018_201012	12 Oct 2020	EB2027172	**10.8**	<0.0005	<0.0005	**0.0005**	<0.0005	**0.0022**	-	<0.0005	<0.002	**0.0007**	**0.0016**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD018	0861_SD018_210412	12 Apr 2021	EB2111116	**48.7**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0104**	-	**0.0287**	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013
QLD_0861_PFASOMP	SD018	0861_SD018_211019	19 Oct 2021	EB2130835	**51.4**	<0.0010	<0.0010	<0.0010	<0.0010	**0.0064**	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD018	0861_SD018_220329	29 Mar 2022	EB2209950	**49.1**	<0.0002	<0.0002	**0.0032**	**0.0003**	**0.0248**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD018	0861_SD018_221018	18 Oct 2022	EB2231197	**52.9**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0080	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP_23	SD018	0861_SD018_231025	25 Oct 2023	EB2333894-AA	**27.5**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0058**	-	<0.0003	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD018	0861_SD018_240409	09 Apr 2024	EB2413910	**33.8**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0034**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD020	0861_SD20_0.2_170601	01 Jun 2017	EB1711387	**31.2**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0092**	-	**0.0004**	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD020	0861_SD20_0_170601	01 Jun 2017	EB1711387	**34.3**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0053**	-	**0.0002**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD020	0861_SD020_0.0_190430	30 Apr 2019	EB1911384	**40.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0032**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD020	0861_SD020_191119	19 Nov 2019	EB1931427	**35.0**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0021**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_SD020_200415	14 Apr 2020	EB2010666-AE	**37.2**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0012**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_QC120_201012	12 Oct 2020	EB2027176-AA	**38.6**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0033**	-	<0.0003	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_QC220_201012	12 Oct 2020	RN1292029	-	<0.001	<0.001	<0.001	<0.001	**0.0057**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD020	0861_SD020_201012	12 Oct 2020	EB2027172	**38.9**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0015**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_SD020_210412	12 Apr 2021	EB2111116	**39.7**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0085**	-	**0.0010**	<0.001	<0.0002	**0.0004**	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_SD020_211019	19 Oct 2021	EB2130835	**41.8**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0038**	-	**0.0007**	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_SD020_220329	29 Mar 2022	EB2209950	**47.0**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0034**	-	**0.0009**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_QC284_221018	18 Oct 2022	EB2231197	**43.3**	<0.0002	<0.0002	**0.0010**	<0.0002	**0.0190**	-	**0.0015**	<0.001	**0.0002**	**0.0005**	<0.0002	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_SD020_221018	18 Oct 2022	EB2231197	**35.2**	<0.0002	<0.0002	**0.0007**	<0.0002	**0.0126**	-	**0.0009**	<0.001	**0.0002**	**0.0003**	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD020	0861_QC184_221019	19 Oct 2022	EB2231197	**43.7**	<0.0002	<0.0002	**0.0010**	<0.0002	**0.0166**	-	**0.0011**	<0.001	**0.0002**	**0.0005**	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD020	0861_SD020_230428	28 Apr 2023	EB2312761-AA	**56.8**	<0.0005	<0.0005	**0.0006**	<0.0005	<0.0090	-	<0.0009	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013
QLD_0861_PFASOMP_23	SD020	0861_SD020_231025	25 Oct 2023	EB2333894-AA	**43.7**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0064**	-	<0.0009	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP_24	SD020	0861_QC101_240409	09 Apr 2024	EB2413950	**45.6**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0034**	-	<0.0004	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	<0.0005	<0.0005
QLD_0861_PFASOMP_24	SD020	0861_QC201_240409	09 Apr 2024	RN1427801	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_24	SD020	0861_SD020_240409	09 Apr 2024	EB2413910	**41.4**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0041**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD021	0861_SD021_0.3_170914	14 Sep 2017	EB1719065	**23.8**	**0.0004**	**0.0002**	**0.0027**	**0.0013**	**0.166**	-	**0.0014**	<0.001	<0.0002	**0.0015**	**0.0003**	**0.0019**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD021	0861_SD021_0_170914	14 Sep 2017	EB1719065	**32.4**	**0.0009**	**0.0009**	**0.0167**	**0.0054**	**0.700**	-	**0.0623**	<0.001	**0.0015**	**0.0086**	**0.0017**	**0.0091**	**0.0015**	**0.0014**	**0.0072**	**0.0023**	**0.0042**	**0.0006**
QLD_0861_PFAS	SD021	0861_SD021_0.0_190503	03 May 2019	EB1911384	**42.0**	<0.0005	**0.0008**	**0.0163**	**0.0007**	**0.255**	-	**0.0077**	<0.001	**0.0005**	**0.0015**	<0.0005	**0.0014**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD021	0861_SD021_200420	20 Apr 2020	EB2011246-AC	**47.7**	**0.0019**	**0.0042**	**0.0864**	**0.008**	**0.615**	-	**0.017**	<0.005	**0.0019**	**0.0069**	<0.001	**0.0088**	<0.001	<0.001	<0.005	<0.001	<0.001	<0.0025
QLD_0861_PFASOMP	SD021	0861_SD021_201014	14 Oct 2020	EB2027172	**44.5**	**0.0098**	**0.0111**	**0.0888**	**0.0047**	**0.227**	-	**0.0079**	**0.008**	**0.0177**	**0.0377**	**0.0075**	**0.0146**	**0.0021**	**0.0008**	**0.0019**	**0.0010**	**0.0010**	<0.0012
QLD_0861_PFASOMP	SD021	0861_SD021_210330	30 Mar 2021	EB2108857	**9.8**	**0.0009**	**0.0011**	**0.0052**	<0.0002	**0.0170**	-	**0.0012**	<0.001	**0.0011**	**0.0035**	**0.0007**	**0.0009**	<0.0002	<0.0002	**0.0002**	**0.0003**	**0.0003**	<0.0005
QLD_0861_PFASOMP	SD021	0861_QC158_211021	21 Oct 2021	EB2130835	**26.7**	**0.0004**	<0.0002	**0.0029**	**0.0002**	**0.0384**	-	**0.0041**	<0.001	**0.0007**	**0.0014**	**0.0004**	**0.0007**	**0.0002**	<0.0002	**0.0006**	**0.0004**	**0.0005**	<0.0005
QLD_0861_PFASOMP	SD021	0861_QC258_211021	21 Oct 2021	RN1333717	-	<0.001	<0.001	**0.0027**	<0.001	**0.037**	<0.001	**0.002**	<0.002	<0.002	**0.0012**	<0.001	**0.0011**	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD021	0861_SD021_211021	21 Oct 2021	EB2130835	**25.2**	**0.0003**	**0.0002**	**0.0018**	**0.0002**	**0.0284**	-	**0.0032**	<0.001	**0.0004**	**0.0009**	**0.0002**	**0.0005**	<0.0002	<0.0002	**0.0005**	**0.0004**	**0.0004**	<0.0005
QLD_0861_PFASOMP	SD021	0861_SD021_220331	31 Mar 2022	EB2209950	**39.7**	<0.0244	<0.0244	<0.0244	<0.0244	**0.130**	-	<0.0244	<0.122	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0244	<0.0611
QLD_0861_PFASOMP	SD021	0861_SD021_221021	21 Oct 2022	EB2231197	**35.5**	**0.0010**	**0.0011**	**0.0133**	**0.0017**	**0.111**	-	**0.0117**	<0.001	**0.0010**	**0.0033**	**0.0008**	**0.0022**	**0.0003**	**0.0002**	**0.0010**	**0.0010**	**0.0012**	<0.0005
QLD_0861_PFASOMP_23	SD021	0861_SD021_230426	26 Apr 2023	EB2312761-AA	**28.0**	**0.0011**	**0.0010**	**0.0065**	**0.0005**	**0.0446**	-	**0.0028**	<0.001	**0.0007**	**0.0018**	**0.0003**	**0.0007**	<0.0002	<0.0002	**0.0004**	**0.0003**	**0.0004**	<0.0005
QLD_0861_PFASOMP_23	SD021	0861_SD021_231023	23 Oct 2023	EB2333894-AA	**15.4**	**0.0092**	**0.0081**	**0.0503**	**0.0038**	**0.337**	-	**0.0235**	**0.005**	**0.0060**	**0.0163**	**0.0048**	**0.0123**	**0.0018**	**0.0014**	**0.0045**	**0.0029**	**0.0051**	<0.0005
QLD_0861_PFASOMP_24	SD021	0861_SD021_240410	10 Apr 2024	EB2413910	**35.9**	<0.0010	**0.0011**	**0.0136**	<0.0020	**0.303**	-	**0.0134**	<0.005	<0.0010	**0.0016**	<0.0010	**0.0028**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFAS	SD025	0861_SD25_0_170601	01 Jun 2017	EB1711387	**27.5**	<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
QLD_0861_PFAS	SD025	0861_SD025_0.0_190507	07 May 2019	EB1911952	**46.3**	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD025	0861_QC102_191120	20 Nov 2019	EB1931427	**26.1**	<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
QLD_0861_PFAS	SD025	0861_QC202_191120	20 Nov 2019	231783	**27**	<0.0001	<0.0001	<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
QLD_0861_PFAS	SD025	0861_SD025_0.0_191120	20 Nov 2019	EB1931427	**25.8**	<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
QLD_0861_PFASOMP	SD025	0861_QC103_200415	15 Apr 2020	EB2010666-AF	**51.8**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0024
QLD_0861_PFASOMP	SD025	0861_QC203_200415	15 Apr 2020	RN1271947	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD025	0861_QC203_200415	15 Apr 2020	RN1274649	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD025	0861_SD025_200415	15 Apr 2020	EB2010666-AF	**62.2**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	<0.0020	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0050
QLD_0861_PFASOMP	SD025	0861_QC125_201014	14 Oct 2020	EB2027176-AB	**27.4**	<0.0002	<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	<0.0002	<0.0005
QLD_0861_PFASOMP	SD025	0861_QC225_201014	14 Oct 2020	RN1292029	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD025	0861_SD025_201014	14 Oct 2020	EB2027208-AA	**23.6**	<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
QLD_0861_PFASOMP	SD025	0861_QC150_210421	21 Apr 2021	EB2111121	**34.7**	<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
QLD_0861_PFASOMP	SD025	0861_QC250_210421	21 Apr 2021	RN1313031	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD025	0861_SD025_210421	21 Apr 2021	EB2111112	**27.0**	<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
QLD_0861_PFASOMP	SD025	0861_SD025_211022	22 Oct 2021	EB2130815	**50.0**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0007	-	<0.0014	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD025	0861_QC170_220328	28 Mar 2022	EB2209942	**28.9**	<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
QLD_0861_PFASOMP	SD025	0861_QC270_220328	28 Mar 2022	RN1349008	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD025	0861_SD025_220328	28 Mar 2022	EB2209946	**32.4**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD025	0861_SD025_221020	20 Oct 2022	EB2231202	**54.0**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD025	0861_QC109_230426	26 Apr 2023	EB2312761-AA	**11.5**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD025	0861_QC209_230426	26 Apr 2023	RN1393133	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_23	SD025	0861_SD025_230426	26 Apr 2023	EB2312761-AB	**10.4**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0005**	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD025	0861_SD025_231026	26 Oct 2023	EB2333898	**14.6**	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD025	0861_QC105_240412	12 Apr 2024	EB2413950	**22.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD025	0861_QC205_240412	12 Apr 2024	RN1427801	-	<0.001	<0.001	<0.001	<0.001	<0.002	<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
QLD_0861_PFASOMP_24	SD025	0861_SD025_240412	12 Apr 2024	EB2413946	**22.9**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD026	0861_SD26_0.3_170602	02 Jun 2017	EB1711373	**42.5**	<0.0002	<0.0002	**0.0040**	**0.0004**	**0.0319**	-	<0.0002	<0.002	<0.001	<0.0002	**0.0003**	<0.0002	**0.0007**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD026	0861_SD26_0_170602	02 Jun 2017	EB1711373	**44.9**	<0.0002	<0.0002	**0.0037**	<0.0002	**0.0308**	-	<0.0002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD026	0861_SD026_190507	07 May 2019	EB1911952	**38.8**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0084**	-	<0.0002	<0.002	<0.001	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD026	0861_QC102_191127	27 Nov 2019	EB1932183	**38.3**	**0.0002**	**0.0003**	**0.0026**	<0.0002	**0.0306**	-	**0.0010**	<0.002	<0.001	**0.0005**	**0.0010**	**0.0005**	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD026	0861_QC202_191127	27 Nov 2019	232094	**40**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.01**	-	**0.001**	<0.0004	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.01
QLD_0861_PFAS	SD026	0861_SD026_191127	27 Nov 2019	EB1932183	**42.7**	<0.0002	<0.0002	**0.0019**	<0.0002	**0.0264**	-	**0.0008**	<0.001	**0.0004**	**0.0008**	**0.0006**	**0.0005**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD026	0861_SD026_200421	21 Apr 2020	EB2011255	**33.2**	<0.0005	<0.0005	**0.0008**	<0.0005	**0.0021**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD026	0861_SD026_201015	15 Oct 2020	EB2027208-AA	**10.0**	<0.0005	<0.0005	**0.0006**	<0.0005	**0.0087**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD026	0861_SD026_210416	16 Apr 2021	EB2111112	**46.7**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0089**	-	<0.0015	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.0005
QLD_0861_PFASOMP	SD026	0861_SD026_211020	20 Oct 2021	EB2130815	**39.5**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0056**	-	<0.0010	<0.001	<0.0002	**0.0003**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD026	0861_SD026_220401	01 Apr 2022	EB2209946	**41.1**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0029**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD026	0861_SD026_221020	20 Oct 2022	EB2231202	**41.4**	<0.0002	<0.0002	<0.0004	<0.0002	**0.0061**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD026	0861_SD026_230419	19 Apr 2023	EB2312057	**42.7**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0053**	-	**0.0005**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD026	0861_SD026_231024	24 Oct 2023	EB2333898	**43.5**	<0.0002	<0.0002	<0.0005	<0.0002	**0.0240**	-	<0.0012	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD026	0861_QC103_240411	11 Apr 2024	EB2413950	**42.2**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0075**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005
QLD_0861_PFASOMP_24	SD026	0861_QC203_240411	11 Apr 2024	RN1427801	-	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0046**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_24	SD026	0861_SD026_240411	11 Apr 2024	EB2413946	**42.8**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0075**	-	<0.0002	<0.001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
QLD_0861_PFAS	SD027	0861_SD027_0_170913	13 Sep 2017	EB1719017	**30.5**	<0.0002	<0.0002	**0.0014**	**0.0003**	**0.0151**	-	<0.0002	<0.001	<0.0002	**0.0008**	**0.0002**	**0.0003**	<0.0002	<0.0002	**0.0005**	**0.0002**	<0.0002	<0.0005
QLD_0861_PFAS	SD027	0861_QC102_0.0_190502	02 May 2019	EB1911384	**78.5**	<0.0028	<0.0012	**0.0067**	<0.0012	**0.0847**	-	<0.0012	<0.001	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0031
QLD_0861_PFAS	SD027	0861_QC202_0.0_190502	02 May 2019	217104	**58**	<0.0002	**0.0003**	**0.0049**	**0.0006**	**0.063**	-	**0.0026**	**0.0004**	**0.001**	**0.0012**	<0.0002	**0.0004**	<0.001	<0.005	<0.005	<0.005	<0.05	<0.05
QLD_0861_PFAS	SD027	0861_SD027_0.0_190502	02 May 2019	EB1911384	**65.0**	<0.0020	<0.0010	**0.0050**	<0.0010	**0.0575**	-	<0.0010	<0.001	<0.0010	**0.0010**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD027	0861_SD027_200415	15 Apr 2020	EB2010666-AE	**5.1**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0005**	-	<0.0005	<0.001	<0.0005	<0.0008	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD027	0861_SD027_201016	16 Oct 2020	EB2027176-AA	**6.0**	<0.0005	<0.0005	**0.0018**	<0.0005	**0.0168**	-	<0.0005	<0.004	**0.0006**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.0008**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD027	0861_SD027_210330	30 Mar 2021	EB2108857	**34.3**	<0.0005	**0.0005**	**0.0065**	**0.0006**	**0.0608**	-	<0.0005	<0.002	**0.0027**	**0.0031**	**0.0008**	**0.0018**	<0.0005	**0.0008**	**0.0010**	**0.0016**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD027	0861_SD027_211026	26 Oct 2021	EB2130850	**23.5**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0083**	-	<0.0002	<0.001	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0005**	<0.0002	<0.0006
QLD_0861_PFASOMP	SD027	0861_SD027_220328	28 Mar 2022	EB2209950	**51.9**	**0.0024**	**0.0036**	**0.0490**	**0.0043**	**0.142**	-	<0.0022	<0.005	**0.0020**	**0.0086**	<0.0010	**0.0035**	<0.0010	<0.0010	<0.0010	<0.0030	<0.0010	<0.0024
QLD_0861_PFASOMP	SD027	0861_SD027_221021	21 Oct 2022	EB2231197	**38.3**	**0.0010**	**0.0016**	**0.0210**	**0.0016**	**0.105**	-	**0.0010**	**0.001**	**0.0017**	**0.0070**	**0.0022**	**0.0027**	**0.0004**	**0.0015**	**0.0008**	**0.0018**	**0.0009**	**0.0009**
QLD_0861_PFASOMP_23	SD027	0861_SD027_230417	17 Apr 2023	EB2312062-AA	**28.7**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0047**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD027	0861_SD027_231024	24 Oct 2023	EB2333894-AA	**7.4**	<0.0003	**0.0003**	**0.0030**	<0.0005	**0.0243**	-	<0.0003	<0.001	<0.0002	**0.0003**	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP_24	SD027	0861_SD027_240409	09 Apr 2024	EB2413910	**45.5**	<0.0002	**0.0005**	**0.0049**	<0.0008	**0.0422**	-	<0.0002	<0.001	<0.0002	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0004**	<0.0006
QLD_0861_PFAS	SD028	0861_SD28_0.3_170601	01 Jun 2017	EB1711387	**35.9**	**0.0002**	<0.0002	**0.0041**	**0.0004**	**0.0257**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD028	0861_SD28_0_170601	01 Jun 2017	EB1711387	**38.0**	<0.0002	<0.0002	**0.0011**	<0.0002	**0.0106**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD028	0861_SD028_0.0_190502	02 May 2019	EB1911384	**12.5**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0021**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD028	0861_QC101_200414	14 Apr 2020	EB2010666-AE	**43.7**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0063**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD028	0861_QC201_200414	14 Apr 2020	RN1271947	-	<0.001	<0.001	**0.0012**	<0.001	**0.013**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD028	0861_QC201_200414	14 Apr 2020	RN1274650	-	<0.001	<0.001	**0.0012**	<0.001	**0.013**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD028	0861_SD028_200414	14 Apr 2020	EB2010666-AE	**46.2**	<0.0002	<0.0002	**0.0007**	<0.0002	**0.0055**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD028	0861_SD028_201012	12 Oct 2020	EB2027172	**18.5**	<0.0005	<0.0005	**0.0009**	<0.0005	**0.0076**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD028	0861_SD028_210412	12 Apr 2021	EB2111116	**42.9**	<0.0005	<0.0005	**0.0036**	<0.0005	**0.118**	-	**0.0023**	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013
QLD_0861_PFASOMP	SD028	0861_QC154_211019	19 Oct 2021	EB2130835	**34.9**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0054**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD028	0861_QC254_211019	19 Oct 2021	RN1333717	-	<0.001	<0.001	**0.0011**	<0.001	**0.012**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP	SD028	0861_SD028_211019	19 Oct 2021	EB2130835	**38.5**	<0.0002	<0.0002	**0.0011**	<0.0002	**0.0090**	-	<0.0002	<0.001	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD028	0861_SD028_220329	29 Mar 2022	EB2209950	**64.5**	<0.0005	<0.0005	**0.0016**	<0.0005	**0.0271**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD028	0861_SD028_221018	21 Oct 2022	EB2231197	**64.5**	**0.0013**	<0.0010	**0.0147**	**0.0017**	**0.453**	-	**0.0104**	<0.005	<0.0010	**0.0013**	<0.0010	<0.0010	<0.0010	<0.0010	**0.0175**	<0.0010	**0.0044**	<0.0025
QLD_0861_PFASOMP_23	SD028	0861_SD028_230509	09 May 2023	EB2314270	**41.3**	<0.0002	<0.0002	**0.0006**	<0.0002	**0.0124**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_Stage2_23	SD028	0861_SD028_230810	10 Aug 2023	1018693	**48**	<0.005	<0.005	<0.005	<0.005	**0.022**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
QLD_0861_PFASOMP_23	SD028	0861_SD028_231025	25 Oct 2023	EB2333894-AA	**43.8**	**0.0005**	<0.0002	**0.0015**	<0.0002	**0.0196**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD028	0861_QC100_240409	09 Apr 2024	EB2413950	**44.8**	<0.0002	<0.0002	**0.0005**	<0.0002	**0.0145**	-	**0.0004**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD028	0861_QC200_240409	09 Apr 2024	RN1427801	-	<0.001	<0.001	<0.001	<0.001	**0.015**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_24	SD028	0861_SD028_240409	09 Apr 2024	EB2413910	**47.4**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0150**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD030	0861_SD030_0.3_170913	13 Sep 2017	EB1719017	**29.4**	<0.0002	<0.0002	**0.0008**	**0.0004**	**0.111**	-	**0.0002**	<0.001	<0.0002	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD030	0861_SD030_0_170913	13 Sep 2017	EB1719017	**24.1**	**0.0008**	**0.0008**	**0.0080**	**0.0006**	**0.0390**	-	**0.0007**	<0.001	**0.0039**	**0.0060**	**0.0019**	**0.0012**	**0.0003**	**0.0003**	**0.0010**	**0.0019**	<0.0002	<0.0005
QLD_0861_PFAS	SD030	0861_QC102_0.0_190429	29 Apr 2019	EB1911384	**32.0**	<0.0005	<0.0005	**0.0060**	<0.0005	**0.153**	-	<0.0005	<0.001	**0.0039**	**0.0016**	<0.0005	**0.0008**	**0.0005**	**0.0015**	**0.0031**	**0.0026**	<0.0005	<0.0012
QLD_0861_PFAS	SD030	0861_QC202_0.0_190429	29 Apr 2019	217104	**29**	**0.0003**	**0.0004**	**0.0098**	**0.0019**	**0.38**	-	**0.001**	**0.0027**	**0.0054**	**0.0021**	**0.0011**	**0.0020**	**0.0019**	**0.005**	**0.01**	**0.0093**	**0.001**	<0.005
QLD_0861_PFAS	SD030	0861_SD030_0.0_190429	29 Apr 2019	EB1911384	**32.9**	**0.0004**	**0.0006**	**0.0084**	**0.0010**	**0.196**	-	**0.0003**	**0.003**	**0.0051**	**0.0024**	**0.0011**	**0.0017**	**0.0015**	**0.0027**	**0.0051**	**0.0042**	**0.0006**	**0.0006**
QLD_0861_PFAS	SD030	0861_SD030_0.3_190513	13 May 2019	EB1912390	**32.0**	<0.0002	<0.0002	**0.0013**	<0.0002	**0.0466**	-	<0.0002	<0.001	**0.0008**	**0.0005**	<0.0002	**0.0003**	**0.0003**	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD030	0861_SD030_200415	15 Apr 2020	EB2010666-AE	**3.2**	<0.0010	<0.0010	**0.0035**	<0.0010	**0.0440**	-	<0.0010	<0.005	**0.0011**	**0.0014**	<0.0010	<0.0010	<0.0010	**0.0016**	**0.0013**	**0.0016**	<0.0010	<0.0025
QLD_0861_PFASOMP	SD030	0861_QC138_210330	30 Mar 2021	EB2108857	**47.7**	<0.0005	<0.0005	**0.0090**	**0.0009**	**0.134**	-	<0.0005	**0.003**	**0.0061**	**0.0039**	**0.0021**	**0.0023**	**0.0033**	**0.0038**	**0.0065**	**0.0076**	**0.0022**	**0.0016**
QLD_0861_PFASOMP	SD030	0861_QC238_210330	30 Mar 2021	RN1310437	-	**0.0011**	<0.001	**0.011**	<0.001	**0.13**	<0.001	<0.001	**0.003**	**0.0054**	**0.0042**	**0.0016**	**0.0025**	**0.0031**	**0.0049**	**0.0062**	**0.011**	**0.0032**	**0.0028**
QLD_0861_PFASOMP	SD030	0861_SD030_210330	30 Mar 2021	EB2108857	**46.4**	<0.0026	<0.0026	**0.0076**	<0.0026	**0.106**	-	<0.0026	<0.013	**0.0057**	**0.0033**	<0.0026	<0.0026	<0.0026	<0.0026	**0.0038**	**0.0043**	<0.0026	<0.0064
QLD_0861_PFASOMP	SD030	0861_QC164_211026	26 Oct 2021	EB2130850	**49.8**	**0.0015**	**0.0010**	**0.0131**	**0.0016**	**0.187**	-	**0.0007**	**0.002**	**0.0040**	**0.0046**	**0.0007**	**0.0025**	**0.0040**	**0.0031**	**0.0049**	**0.0078**	**0.0050**	**0.0019**
QLD_0861_PFASOMP	SD030	0861_QC264_211026	26 Oct 2021	RN1333717	-	**0.0011**	**0.0014**	**0.014**	**0.0013**	**0.16**	<0.001	<0.001	<0.002	**0.005**	**0.0046**	**0.0013**	**0.0024**	**0.003**	**0.0033**	**0.0069**	**0.0058**	**0.0038**	<0.002
QLD_0861_PFASOMP	SD030	0861_SD030_211026	26 Oct 2021	EB2130850	**47.6**	**0.0014**	**0.0010**	**0.0111**	**0.0014**	**0.132**	-	**0.0008**	**0.002**	**0.0036**	**0.0048**	**0.0007**	**0.0020**	**0.0026**	**0.0034**	**0.0050**	**0.0072**	**0.0043**	**0.0020**
QLD_0861_PFASOMP	SD030	0861_SD030_220328	28 Mar 2022	EB2209950	**64.3**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD030	0861_SD030_221021	21 Oct 2022	EB2231197	**66.0**	**0.0018**	**0.0022**	**0.0336**	**0.0058**	**0.296**	-	**0.0022**	**0.002**	**0.0048**	**0.0070**	**0.0026**	**0.0035**	**0.0016**	**0.0026**	**0.0067**	**0.0126**	**0.0045**	**0.0022**
QLD_0861_PFASOMP_23	SD030	0861_SD030_230417	17 Apr 2023	EB2312062-AA	**28.1**	<0.0002	<0.0002	**0.0012**	<0.0002	**0.0089**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD030	0861_SD030_231024	24 Oct 2023	EB2333894-AA	**30.0**	<0.0004	<0.0002	**0.0023**	<0.0004	**0.0388**	-	<0.0004	<0.001	<0.0002	**0.0002**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD030	0861_SD030_240409	09 Apr 2024	EB2413910	**71.1**	<0.0005	**0.0011**	**0.0128**	<0.0014	**0.176**	-	<0.0005	<0.002	**0.0018**	**0.0030**	**0.0014**	**0.0017**	**0.0005**	**0.0013**	**0.0022**	<0.0005	**0.0030**	<0.0012
QLD_0861_PFAS	SD033	0861_SD033_0.3_170914	14 Sep 2017	EB1719065	**23.5**	**0.0003**	**0.0004**	**0.0045**	**0.0010**	**0.242**	-	**0.0024**	<0.001	**0.0008**	**0.0035**	**0.0005**	**0.0023**	**0.0005**	**0.0003**	**0.0003**	**0.0003**	<0.0002	<0.0005
QLD_0861_PFAS	SD033	0861_SD033_0_170914	14 Sep 2017	EB1719065	**21.9**	<0.0002	**0.0002**	**0.0019**	**0.0002**	**0.0432**	-	**0.0070**	<0.001	**0.0008**	**0.0028**	**0.0006**	**0.0009**	**0.0003**	**0.0004**	**0.0020**	**0.0039**	**0.0015**	<0.0005
QLD_0861_PFASOMP	SD033	0861_SD033_0.0_190503	03 May 2019	EB1911384	**40.5**	<0.0005	<0.0005	**0.0069**	<0.0005	**0.411**	-	**0.0917**	<0.001	**0.0010**	**0.0045**	**0.0005**	**0.0038**	**0.0016**	**0.0089**	**0.0529**	**0.0544**	**0.0202**	**0.0051**
QLD_0861_PFASOMP	SD033	0861_SD033_0.3_190503	03 May 2019	EB1911384	**39.6**	<0.0005	<0.0005	**0.0058**	<0.0005	**0.274**	-	**0.0781**	<0.001	**0.0007**	**0.0029**	<0.0005	**0.0031**	**0.0016**	**0.0068**	**0.0273**	**0.0198**	**0.0074**	**0.0016**
QLD_0861_PFASOMP	SD033	0861_SD033_200427	27 Apr 2020	EB2011562	**36.0**	**0.0011**	**0.0014**	**0.0132**	**0.0014**	**0.211**	-	**0.0956**	**0.002**	**0.0022**	**0.0078**	**0.0021**	**0.0060**	**0.0008**	**0.0019**	**0.0166**	**0.0788**	**0.0356**	**0.0169**
QLD_0861_PFASOMP	SD033	0861_SD033_201016	16 Oct 2020	EB2027176-AA	**3.9**	**0.0021**	**0.0023**	**0.0154**	<0.0010	**0.0587**	-	**0.0063**	**0.008**	**0.0144**	**0.0093**	**0.0024**	**0.0038**	<0.0010	<0.0010	**0.0017**	**0.0045**	**0.0020**	<0.0025
QLD_0861_PFASOMP	SD033	0861_SD033_210415	15 Apr 2021	EB2111116	**37.4**	**0.0045**	**0.0080**	**0.0884**	**0.0066**	**0.915**	-	**0.0630**	<0.005	**0.0066**	**0.0237**	**0.0054**	**0.0195**	**0.0019**	**0.0014**	**0.0024**	**0.0045**	**0.0029**	<0.0025
QLD_0861_PFASOMP	SD033	0861_SD033_211026	26 Oct 2021	EB2130850	**37.8**	**0.0011**	**0.0013**	**0.0132**	**0.0016**	**0.310**	-	**0.0213**	<0.001	**0.0016**	**0.0043**	**0.0006**	**0.0030**	**0.0003**	**0.0003**	**0.0006**	**0.0010**	**0.0005**	<0.0006
QLD_0861_PFASOMP	SD033	0861_SD033_220405	05 Apr 2022	EB2209950	**42.0**	**0.0012**	**0.0021**	**0.0174**	**0.0012**	**0.176**	-	**0.0189**	<0.001	**0.0013**	**0.0050**	**0.0008**	**0.0030**	<0.0002	<0.0002	**0.0005**	**0.0006**	**0.0003**	<0.0005
QLD_0861_PFASOMP	SD033	0861_QC194_221025	25 Oct 2022	EB2231825	**33.3**	**0.0003**	**0.0006**	**0.0063**	**0.0004**	**0.133**	-	**0.0063**	<0.001	**0.0006**	**0.0022**	**0.0003**	**0.0013**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD033	0861_QC294_221025	25 Oct 2022	RN1371573	-	<0.001	<0.001	**0.013**	<0.001	**0.21**	**0.0015**	**0.006**	<0.002	<0.002	**0.0032**	<0.001	**0.0026**	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD033	0861_SD033_221025	25 Oct 2022	EB2231825	**32.7**	**0.0005**	**0.0009**	**0.0138**	**0.0009**	**0.207**	-	**0.0145**	<0.001	**0.0012**	**0.0043**	**0.0006**	**0.0026**	<0.0002	<0.0002	**0.0003**	**0.0006**	<0.0002	<0.0006
QLD_0861_PFASOMP_23	SD033	0861_SD033_230427	27 Apr 2023	EB2312761-AA	**20.0**	**0.0057**	**0.0119**	**0.105**	**0.0063**	**0.468**	-	<0.0176	<0.005	**0.0067**	**0.0174**	**0.0033**	**0.0115**	<0.0010	<0.0010	**0.0025**	**0.0033**	**0.0023**	<0.0025
QLD_0861_PFASOMP_23	SD033	0861_SD033_231030	30 Oct 2023	EB2333894-AA	**24.8**	**0.0086**	**0.0057**	**0.0309**	**0.0030**	**0.291**	-	**0.0093**	**0.005**	**0.0064**	**0.0118**	**0.0015**	**0.0057**	**0.0012**	**0.0008**	**0.0013**	**0.0011**	**0.0015**	<0.0005
QLD_0861_PFASOMP_24	SD033	0861_SD033_240409	09 Apr 2024	EB2413910	**41.5**	**0.0025**	**0.0030**	**0.0273**	<0.0024	**0.305**	-	**0.257**	<0.002	**0.0023**	**0.0105**	**0.0034**	**0.0087**	**0.0016**	**0.0038**	**0.0344**	**0.177**	**0.110**	**0.0622**
QLD_0861_PFAS	SD034	0861_SD34_0_170601	01 Jun 2017	EB1711387	**40.9**	<0.0002	**0.0007**	**0.0083**	**0.0007**	**0.0732**	-	**0.0008**	<0.001	<0.0002	**0.0012**	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD034	0861_SD034_0.0_190430	30 Apr 2019	EB1911384	**41.4**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0055**	-	**0.0006**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD034	0861_SD034_191119	19 Nov 2019	EB1931427	**59.0**	**0.0002**	<0.0002	**0.0009**	<0.0002	**0.0066**	-	<0.0002	<0.001	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD034	0861_SD034_200414	14 Apr 2020	EB2010666-AE	**28.1**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0018**	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD034	0861_SD034_201012	12 Oct 2020	EB2027172	**30.4**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0109**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD034	0861_SD034_210412	12 Apr 2021	EB2111116	**40.7**	<0.0002	<0.0002	**0.0005**	<0.0002	**0.0318**	-	<0.0008	<0.001	<0.0002	<0.0002	<0.0002	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD034	0861_SD034_211019	19 Oct 2021	EB2130835	**35.6**	<0.0005	<0.0005	<0.0008	<0.0005	**0.0054**	-	<0.0008	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0006	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD034	0861_SD034_220329	29 Mar 2022	EB2209950	**31.2**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0039**	-	**0.0010**	<0.001	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP	SD034	0861_SD034_221018	18 Oct 2022	EB2231197	**42.5**	<0.0005	<0.0005	**0.0056**	<0.0005	**0.0565**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP_23	SD034	0861_SD034_230428	28 Apr 2023	EB2312761-AA	**38.6**	**0.0006**	**0.0007**	**0.0060**	**0.0005**	**0.0693**	-	<0.0002	<0.001	**0.0003**	**0.0008**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD034	0861_SD034_231025	25 Oct 2023	EB2333894-AA	**11.5**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0035**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD034	0861_SD034_240409	09 Apr 2024	EB2413910	**47.2**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0026	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD036	0861_SED36_0.3_170530	30 May 2017	ES1713428	**23.3**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0010**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD036	0861_SED36_0_170530	30 May 2017	ES1713428	**27.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0005**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD036	0861_SD036_0_180119	18 Jan 2018	EB1802500	**33.5**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0015**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD036	0861_SD036_0.0_190501	01 May 2019	EB1911384	**31.9**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0041**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD036	0861_SD036_200415	15 Apr 2020	EB2010666-AE	**39.4**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0048**	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0016	<0.0005	<0.0005	<0.0080	<0.0066	<0.0030	<0.0014	<0.0012
QLD_0861_PFASOMP	SD036	0861_SD036_201014	14 Oct 2020	EB2027172	**37.9**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0024**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD036	0861_QC143_210414	14 Apr 2021	EB2111121	**46.9**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0070**	-	**0.0644**	<0.002	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0008	<0.0005	<0.0012
QLD_0861_PFASOMP	SD036	0861_QC243_210414	14 Apr 2021	RN1313031	-	<0.001	<0.001	<0.001	<0.001	**0.0059**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD036	0861_SD036_210414	14 Apr 2021	EB2111116	**46.9**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0046**	-	<0.0038	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD036	0861_QC156_211020	20 Oct 2021	EB2130835	**42.7**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0043**	-	<0.0016	<0.002	<0.0005	<0.0006	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0018	<0.0005	<0.0012
QLD_0861_PFASOMP	SD036	0861_QC256_211020	20 Oct 2021	RN1333717	-	<0.001	<0.001	<0.001	<0.001	**0.0038**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD036	0861_SD036_211020	20 Oct 2021	EB2130835	**40.7**	<0.0005	<0.0005	<0.0006	<0.0005	<0.0044	-	<0.0006	<0.002	<0.0006	<0.0006	<0.0008	<0.0005	<0.0005	<0.0005	<0.0009	<0.0012	<0.0005	<0.0012
QLD_0861_PFASOMP	SD036	0861_SD036_220401	01 Apr 2022	EB2209950	**28.4**	<0.0002	<0.0002	<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	<0.0002	<0.0005
QLD_0861_PFASOMP	SD036	0861_SD036_221019	19 Oct 2022	EB2231197	**40.8**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0096**	-	**0.0007**	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD036	0861_SD036_230522	22 May 2023	EB2315514	**43.3**	<0.0002	<0.0002	<0.0002	<0.0004	<0.0014	-	<0.0012	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD036	0861_SD036_231024	24 Oct 2023	EB2333894-AA	**51.6**	<0.0008	<0.0002	<0.0002	<0.0002	<0.0041	-	<0.0036	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0005
QLD_0861_PFASOMP_24	SD036	0861_SD036_240411	11 Apr 2024	EB2413910	**38.9**	**0.0060**	<0.0002	<0.0002	<0.0002	<0.0018	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD037	0861_SD037_0_170913	13 Sep 2017	EB1719017	**23.6**	**0.0024**	**0.0020**	**0.0159**	**0.0016**	**0.0504**	-	<0.0002	<0.001	**0.0011**	**0.0070**	**0.0011**	**0.0024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD037	0861_QC102_0.0_190501	01 May 2019	EB1911384	**32.1**	<0.0005	<0.0005	**0.0029**	<0.0005	**0.0324**	-	<0.0009	<0.001	<0.0005	**0.0005**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFAS	SD037	0861_QC202_0.0_190501	01 May 2019	217104	**23**	**0.0009**	**0.0007**	**0.0060**	**0.0005**	**0.063**	-	**0.0007**	**0.0008**	**0.001**	**0.0021**	**0.0006**	**0.0013**	**0.0004**	**0.0007**	<0.0005	<0.0005	<0.0005	<0.005
QLD_0861_PFAS	SD037	0861_SD037_0.0_190501	01 May 2019	EB1911384	**31.0**	**0.0014**	**0.0013**	**0.0130**	**0.0012**	**0.363**	-	**0.0006**	**0.001**	**0.0021**	**0.0038**	**0.0011**	**0.0030**	**0.0011**	**0.0012**	**0.0005**	**0.0004**	<0.0002	<0.0005
QLD_0861_PFAS	SD037	0861_SD037_0.0_191119	19 Nov 2019	EB1931427	**40.3**	**0.0028**	**0.0029**	**0.0280**	**0.0050**	**0.432**	-	**0.0023**	<0.001	**0.0028**	**0.0077**	**0.0023**	**0.0079**	**0.0036**	**0.0113**	**0.0077**	**0.0036**	**0.0004**	<0.0005
QLD_0861_PFASOMP	SD037	0861_SD037_200415	15 Apr 2020	EB2010666-AE	**32.8**	**0.0011**	**0.0008**	**0.0068**	<0.0005	**0.0315**	-	<0.0005	<0.001	**0.0014**	**0.0035**	**0.0007**	**0.0010**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD037	0861_SD037_201014	14 Oct 2020	EB2027172	**82.1**	**0.0281**	**0.0320**	**0.277**	**0.0275**	**1.04**	-	<0.0074	<0.019	**0.0208**	**0.0699**	**0.0160**	**0.0604**	<0.0044	<0.0038	<0.0025	<0.0025	<0.0025	<0.0063
QLD_0861_PFASOMP	SD037	0861_QC140_210330	30 Mar 2021	EB2108857	**35.8**	**0.0004**	**0.0004**	**0.0046**	**0.0005**	**0.0776**	-	**0.0010**	**0.001**	**0.0036**	**0.0023**	**0.0011**	**0.0012**	**0.0006**	**0.0015**	**0.0012**	**0.0012**	**0.0002**	<0.0005
QLD_0861_PFASOMP	SD037	0861_QC240_210330	30 Mar 2021	RN1310437	-	<0.001	<0.001	**0.0044**	<0.001	**0.1**	**0.0014**	**0.0016**	<0.002	**0.003**	**0.0018**	<0.001	**0.0015**	**0.001**	**0.0037**	**0.003**	**0.0025**	<0.002	<0.002
QLD_0861_PFASOMP	SD037	0861_SD037_210330	30 Mar 2021	EB2108857	**34.4**	<0.0005	<0.0005	**0.0043**	**0.0006**	**0.0913**	-	**0.0009**	<0.002	**0.0040**	**0.0023**	**0.0012**	**0.0011**	**0.0008**	**0.0024**	**0.0014**	**0.0010**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD037	0861_SD037_211026	26 Oct 2021	EB2130850	**43.8**	**0.0004**	**0.0004**	**0.0055**	**0.0006**	**0.0325**	-	**0.0003**	<0.001	**0.0005**	**0.0009**	**0.0003**	**0.0008**	**0.0003**	**0.0005**	<0.0002	**0.0004**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD037	0861_SD037_220330	30 Mar 2022	EB2209950	**55.4**	**0.0013**	<0.0010	**0.0139**	**0.0010**	**0.135**	-	<0.0010	<0.005	**0.0012**	**0.0036**	<0.0010	**0.0016**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD037	0861_SD037_221021	21 Oct 2022	EB2231197	**81.8**	<0.0018	**0.0022**	**0.0210**	**0.0034**	**0.184**	-	<0.0028	<0.001	**0.0013**	**0.0046**	<0.0004	**0.0018**	<0.0002	**0.0012**	**0.0009**	**0.0016**	**0.0005**	<0.0006

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP_23	SD037	0861_SD037_230418	18 Apr 2023	EB2312062-AA	**88.7**	**0.0054**	**0.0044**	**0.0338**	**0.0025**	**0.146**	-	**0.0020**	<0.001	**0.0037**	**0.0089**	**0.0018**	**0.0027**	**0.0005**	**0.0010**	**0.0006**	**0.0017**	<0.0012	**0.0007**
QLD_0861_PFASOMP_23	SD037	0861_SD037_231027	27 Oct 2023	EB2333894-AA	**88.9**	**0.0374**	**0.0276**	**0.183**	**0.0195**	**1.06**	-	**0.0041**	<0.013	**0.0142**	**0.0391**	**0.0062**	**0.0251**	**0.0019**	**0.0030**	**0.0021**	<0.0023	**0.0009**	<0.0006
QLD_0861_PFASOMP_24	SD037	0861_SD037_240410	10 Apr 2024	EB2413910	**85.6**	**0.0025**	**0.0029**	**0.0262**	<0.0034	**0.313**	-	**0.0046**	<0.002	**0.0017**	**0.0046**	**0.0010**	**0.0020**	<0.0005	**0.0018**	**0.0013**	**0.0013**	<0.0005	<0.0013
QLD_0861_PFASOMP	SD038	0861_SD038_200414	14 Apr 2020	EB2010666-AE	**45.1**	<0.0005	<0.0005	**0.0032**	<0.0005	**0.0175**	-	<0.0005	<0.001	**0.0040**	**0.0025**	**0.0006**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD038	0861_SD038_201016	16 Oct 2020	EB2027176-AA	**16.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0006**	-	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD038	0861_SD038_210330	30 Mar 2021	EB2108857	**44.2**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0010**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD038	0861_SD038_211025	25 Oct 2021	EB2130835	**7.6**	<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
QLD_0861_PFASOMP	SD038	0861_SD038_220330	30 Mar 2022	EB2209950	**34.6**	<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
QLD_0861_PFASOMP	SD038	0861_SD038_221024	24 Oct 2022	EB2231825	**53.6**	<0.0002	<0.0002	**0.0017**	<0.0002	**0.0212**	-	**0.0004**	<0.001	**0.0013**	**0.0014**	**0.0005**	**0.0005**	<0.0002	**0.0004**	**0.0008**	**0.0015**	**0.0003**	<0.0005
QLD_0861_PFASOMP_23	SD038	0861_SD038_230420	21 Apr 2023	EB2312062-AA	**5.1**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0008**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD038	0861_SD038_231129	29 Nov 2023	EB2337879-AA	**87.7**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0019**	-	<0.0002	<0.001	<0.0002	<0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP_24	SD038	0861_SD038_240418	18 Apr 2024	EB2413910	**45.4**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0016	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD039	0861_SED39_0.3_170530	30 May 2017	ES1713428	**32.0**	<0.0002	<0.0002	<0.0002	**0.0021**	**0.0008**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD039	0861_SED39_0_170530	30 May 2017	ES1713428	**44.6**	<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
QLD_0861_PFAS	SD039	0861_SD039_0.0_191120	20 Nov 2019	EB1931427	**34.4**	<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
QLD_0861_PFASOMP	SD039	0861_SD039_200415	15 Apr 2020	EB2010666-AF	**30.1**	<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
QLD_0861_PFASOMP	SD039	0861_QC126_201014	14 Oct 2020	EB2027176-AB	**34.8**	<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
QLD_0861_PFASOMP	SD039	0861_QC226_201014	14 Oct 2020	RN1292029	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD039	0861_SD039_201014	14 Oct 2020	EB2027208-AA	**35.9**	<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
QLD_0861_PFASOMP	SD039	0861_SD039_210330	30 Mar 2021	EB2108857	**40.1**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0020**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0006	<0.0042	<0.0006	<0.0005	<0.0012
QLD_0861_PFASOMP	SD039	0861_QC160_211022	22 Oct 2021	EB2130835	**35.1**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0014**	-	<0.0002	<0.001	**0.0003**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD039	0861_QC260_211022	22 Oct 2021	RN1333717	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD039	0861_SD039_211022	22 Oct 2021	EB2130815	**39.0**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD039	0861_SD039_220328	28 Mar 2022	EB2209946	**34.2**	<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
QLD_0861_PFASOMP	SD039	0861_SD039_221020	20 Oct 2022	EB2231202	**38.9**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD039	0861_SD039_230426	26 Apr 2023	EB2312761-AB	**37.6**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP_23	SD039	0861_SD039_231026	26 Oct 2023	EB2333898	**45.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0014	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD039	0861_SD039_240412	12 Apr 2024	EB2413946	**40.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0006**	-	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0007	<0.0013
QLD_0861_PFAS	SD040	0861_SD40_0_170602	02 Jun 2017	EB1711373	**25.0**	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD040	0861_SD040_0.0_190506	06 May 2019	EB1911952	**34.4**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0025**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD040	0861_SD040_0.0_191120	20 Nov 2019	EB1931427	**20.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0009**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD040	0861_SD040_200415	15 Apr 2020	EB2010666-AF	**24.6**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0044**	-	<0.0002	<0.001	**0.0002**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD040	0861_SD040_201015	15 Oct 2020	EB2027208-AA	**5.7**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0015**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD040	0861_SD040_210415	15 Apr 2021	EB2111112	**29.0**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0009**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD040	0861_SD040_211019	19 Oct 2021	EB2130815	**35.1**	<0.0002	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0035**	-	<0.0034	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP	SD040	0861_SD040_220328	28 Mar 2022	EB2209946	**31.3**	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0016**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD040	0861_SD040_221020	20 Oct 2022	EB2231202	**41.9**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0034	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD040	0861_SD040_230418	18 Apr 2023	EB2312057	**27.0**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0032**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD040	0861_SD040_231026	26 Oct 2023	EB2333898	**79.4**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0130**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0013	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD040	0861_SD040_240412	12 Apr 2024	EB2413946	**25.6**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0021**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD041	0861_SD041_0_171020	17 Oct 2017	EB1721894	**45.6**	**0.0014**	**0.0011**	**0.0107**	**0.0010**	**0.0873**	-	<0.0002	<0.001	**0.0011**	**0.0040**	**0.0005**	**0.0007**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD041	0861_QC101_190508	08 May 2019	EB1911952	**89.6**	**0.0134**	**0.0140**	**0.134**	**0.0156**	**0.700**	-	**0.0070**	**0.002**	**0.0047**	**0.0247**	**0.0036**	**0.0093**	**0.0007**	**0.0012**	**0.0022**	**0.0042**	**0.0014**	**0.0018**
QLD_0861_PFAS	SD041	0861_QC201_190508	08 May 2019	217521	**84**	**0.011**	**0.0097**	**0.13**	**0.01**	**0.85**	-	**0.0079**	<0.004	**0.0043**	**0.018**	**0.0029**	**0.0080**	<0.002	<0.01	<0.01	<0.01	<0.01	<0.1
QLD_0861_PFAS	SD041	0861_SD041_0.0_190508	08 May 2019	EB1911952	**81.4**	**0.0074**	**0.0082**	**0.0699**	**0.0079**	**0.391**	-	**0.0038**	**0.001**	**0.0026**	**0.0133**	**0.0020**	**0.0050**	**0.0003**	**0.0006**	**0.0009**	**0.0022**	**0.0008**	**0.0009**
QLD_0861_PFAS	SD041	0861_SD041_191119	19 Nov 2019	EB1931427	**73.8**	**0.0133**	**0.0134**	**0.103**	**0.0120**	**0.366**	-	**0.0054**	**0.003**	**0.0060**	**0.0249**	**0.0037**	**0.0073**	**0.0004**	**0.0008**	**0.0013**	**0.0031**	**0.0011**	**0.0010**
QLD_0861_PFASOMP	SD041	0861_SD041_200415	15 Apr 2020	EB2010666-AE	**89.2**	**0.0426**	**0.0477**	**0.363**	**0.0338**	**1.08**	-	<0.0025	<0.002	**0.0134**	**0.0760**	**0.0083**	**0.0366**	<0.0025	<0.0025	**0.0046**	**0.0028**	<0.0025	<0.0063
QLD_0861_PFASOMP	SD041	0861_SD041_201015	15 Oct 2020	EB2027172	**87.6**	**0.0307**	**0.0420**	**0.375**	**0.0412**	**1.08**	-	**0.0081**	<0.025	**0.0162**	**0.0574**	**0.0113**	**0.0259**	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0126
QLD_0861_PFASOMP	SD041	0861_SD041_210330	30 Mar 2021	EB2108857	**78.9**	**0.0040**	**0.0049**	**0.0584**	**0.0086**	**0.655**	-	**0.0193**	<0.006	**0.0058**	**0.0088**	**0.0026**	**0.0105**	<0.0012	<0.0012	**0.0079**	**0.0140**	**0.0019**	<0.0031
QLD_0861_PFASOMP	SD041	0861_SD041_211026	26 Oct 2021	EB2130850	**46.8**	**0.0007**	**0.0010**	**0.0149**	**0.0027**	**0.178**	-	**0.0016**	<0.001	**0.0008**	**0.0024**	**0.0004**	**0.0013**	<0.0002	<0.0002	**0.0006**	**0.0005**	<0.0002	<0.0006
QLD_0861_PFASOMP	SD041	0861_SD041_220328	28 Mar 2022	EB2209950	**61.0**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0010**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD041	0861_QC188_221020	20 Oct 2022	EB2231197	**83.3**	**0.0021**	**0.0045**	**0.0306**	**0.0037**	**0.230**	-	**0.0044**	<0.001	<0.0006	**0.0037**	<0.0006	**0.0018**	<0.0002	<0.0002	**0.0010**	**0.0025**	<0.0002	<0.0006
QLD_0861_PFASOMP	SD041	0861_QC288_221020	20 Oct 2022	RN1370747	-	<0.005	**0.0097**	**0.1**	**0.0078**	**0.57**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
QLD_0861_PFASOMP	SD041	0861_SD041_221020	20 Oct 2022	EB2231197	**89.3**	**0.0023**	**0.0122**	**0.0746**	**0.0061**	**0.291**	-	**0.0050**	<0.001	**0.0006**	**0.0057**	**0.0012**	**0.0027**	<0.0002	<0.0002	**0.0010**	**0.0024**	**0.0003**	<0.0006
QLD_0861_PFASOMP_23	SD041	0861_SD041_230418	18 Apr 2023	EB2312062-AA	**90.1**	**0.0098**	**0.0217**	**0.180**	**0.0296**	**1.62**	-	**0.0128**	<0.024	<0.0049	**0.0168**	<0.0049	**0.0177**	<0.0049	<0.0049	<0.0049	**0.0054**	<0.0049	<0.0122
QLD_0861_PFASOMP_23	SD041	0861_SD041_231024	24 Oct 2023	EB2333894-AA	**58.9**	**0.0169**	**0.0259**	**0.245**	**0.0336**	**1.55**	-	**0.0226**	**0.002**	**0.0036**	**0.0184**	**0.0060**	**0.0307**	**0.0022**	**0.0038**	**0.0069**	**0.0093**	**0.0011**	<0.0005
QLD_0861_PFASOMP_24	SD041	0861_SD041_240412	12 Apr 2024	EB2413910	**70.2**	**0.0015**	**0.0022**	**0.0192**	<0.0028	**0.198**	-	**0.0052**	<0.002	**0.0036**	**0.0060**	**0.0014**	**0.0054**	<0.0005	<0.0005	**0.0020**	<0.0032	<0.0005	<0.0013
QLD_0861_PFAS	SD043	0861_SD43_0.3_170605	05 Jun 2017	EB1711471	**29.6**	<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
QLD_0861_PFAS	SD043	0861_SD43_0_170605	05 Jun 2017	EB1711471	**32.7**	<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
QLD_0861_PFAS	SD043	0861_SD043_0.0_191120	19 Nov 2019	EB1931427	**34.2**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD043	0861_SD043_200428	28 Apr 2020	EB2011568	**42.2**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD043	0861_SD043_201015	15 Oct 2020	EB2027208-AA	**36.0**	<0.0005	<0.0005	<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	<0.0012
QLD_0861_PFASOMP	SD043	0861_SD043_210415	15 Apr 2021	EB2111112	**38.5**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD043	0861_SD043_211022	22 Oct 2021	EB2130815	**36.1**	<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
QLD_0861_PFASOMP	SD043	0861_SD043_220404	04 Apr 2022	EB2209946	**39.4**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD043	0861_SD043_221020	20 Oct 2022	EB2231202	**42.0**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0008	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD043	0861_SD043_230419	19 Apr 2023	EB2312057	**35.5**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD043	0861_SD043_231026	26 Oct 2023	EB2333898	**30.3**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD043	0861_SD043_240411	11 Apr 2024	EB2413946	**19.5**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFAS	SD045	0861_SD45_0_170602	02 Jun 2017	EB1711373	**41.0**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0028**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD045	0861_SD045_0.0_190506	06 May 2019	EB1911952	**48.8**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0033**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD045	0861_QC104_191120	20 Nov 2019	EB1931427	**29.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0016**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD045	0861_QC204_1_191120	20 Nov 2019	231783	**32**	<0.0001	<0.0001	**0.0002**	<0.0001	**0.0046**	-	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
QLD_0861_PFAS	SD045	0861_SD045_0.0_191120	20 Nov 2019	EB1931427	**34.9**	<0.0002	<0.0002	**0.0007**	<0.0002	**0.0017**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD045	0861_SD045_200415	15 Apr 2020	EB2010666-AF	**15.3**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD045	0861_SD045_201015	15 Oct 2020	EB2027208-AA	**5.0**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0027**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD045	0861_SD045_210415	15 Apr 2021	EB2111112	**36.9**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0031**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD045	0861_SD045_211019	19 Oct 2021	EB2130815	**40.7**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0028**	-	<0.0002	<0.001	**0.0002**	**0.0002**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD045	0861_SD045_220329	29 Mar 2022	EB2209946	**36.6**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0026**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD045	0861_SD045_221020	20 Oct 2022	EB2231202	**48.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0040	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD045	0861_SD045_230418	18 Apr 2023	EB2312057	**48.3**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0082**	-	**0.0013**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0006
QLD_0861_PFASOMP_23	SD045	0861_SD045_231026	26 Oct 2023	EB2333898	**70.2**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0090**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0010	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD045	0861_QC104_240412	12 Apr 2024	EB2413950	**27.7**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0039**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
QLD_0861_PFASOMP_24	SD045	0861_QC204_240412	12 Apr 2024	RN1427801	-	<0.001	<0.001	<0.001	<0.001	**0.0021**	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_24	SD045	0861_SD045_240412	12 Apr 2024	EB2413946	**29.3**	<0.0002	<0.0002	**0.0002**	<0.0002	**0.0043**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005
QLD_0861_PFAS	SD047	0861_SD47_0.3_170602	02 Jun 2017	EB1711373	**20.1**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0052**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFAS	SD049	0861_SD049_0.4_170914	14 Sep 2017	EB1719065	**42.0**	**0.0004**	**0.0004**	**0.0033**	**0.0003**	**0.0264**	-	*<0.0002*	**0.0002**	*<0.001*	*<0.0002*	**0.0009**	*<0.0002*	**0.0004**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD049	0861_SD049_0.0_190501	10 May 2019	EB1911952	**59.3**	**0.0009**	**0.0008**	**0.0084**	**0.0009**	**0.0897**	-	*<0.0002*	*<0.001*	**0.0009**	**0.0021**	**0.0004**	**0.0013**	**0.0003**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD049	0861_QC109_200420	20 Apr 2020	EB2011246-AC	**46.9**	*<0.0005*	*<0.0005*	**0.0036**	*<0.0005*	**0.0222**	-	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD049	0861_QC209_200420	20 Apr 2020	RN1274652	-	*<0.001*	*<0.001*	**0.0034**	*<0.001*	**0.049**	*<0.001*	*<0.001*	*<0.002*	*<0.002*	**0.0013**	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
QLD_0861_PFASOMP	SD049	0861_SD049_200420	20 Apr 2020	EB2011246-AC	**45.2**	**0.0004**	**0.0003**	**0.0032**	**0.0004**	**0.0365**	-	*<0.0002*	*<0.001*	**0.003**	**0.0013**	**0.0002**	**0.0007**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD049	0861_SD049_200420	20 Apr 2020	EB2012139	**49.6**	*<0.0005*	*<0.0005*	**0.0044**	*<0.0005*	**0.0309**	-	*<0.0005*	*<0.001*	*<0.0024*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*
QLD_0861_PFASOMP	SD049	0861_SD049_201013	13 Oct 2020	EB2027172	**56.0**	*<0.0010*	*<0.0010*	**0.0087**	**0.0010**	**0.0954**	-	*<0.0010*	*<0.005*	**0.0016**	**0.0032**	*<0.0010*	**0.0022**	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*
QLD_0861_PFASOMP	SD049	0861_SD049_210413	13 Apr 2021	EB2111116	**35.7**	**0.0003**	**0.0002**	**0.0026**	**0.0002**	**0.0386**	-	*<0.0002*	*<0.001*	**0.0003**	**0.0009**	*<0.0002*	**0.0005**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD049	0861_SD049_211020	20 Oct 2021	EB2130835	**46.3**	*<0.0012*	*<0.0012*	**0.0085**	*<0.0012*	**0.122**	-	*<0.0012*	*<0.006*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*
QLD_0861_PFASOMP	SD049	0861_QC173_220331	31 Mar 2022	EB2209942	**16.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0003**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD049	0861_QC273_220331	31 Mar 2022	RN1349008	-	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
QLD_0861_PFASOMP	SD049	0861_SD049_220331	31 Mar 2022	EB2209950	**15.9**	*<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*
QLD_0861_PFASOMP	SD049	0861_QC186_221019	19 Oct 2022	EB2231197	**20.4**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0135**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD049	0861_QC286_221019	19 Oct 2022	RN1370747	-	*<0.001*	*<0.001*	*<0.001*	*<0.001*	**0.067**	*<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*
QLD_0861_PFASOMP	SD049	0861_SD049_221019	19 Oct 2022	EB2231197	**10.3**	*<0.0002*	*<0.0002*	**0.0004**	*<0.0002*	**0.0104**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD049	0861_SD049_230426	26 Apr 2023	EB2312761-AA	**61.6**	**0.0002**	**0.0002**	**0.0035**	**0.0005**	**0.0604**	-	*<0.0002*	*<0.001*	*<0.0002*	**0.0004**	*<0.0002*	**0.0007**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_24	SD049	0861_QC102_240410	10 Apr 2024	EB2413950	**55.6**	**0.0003**	*<0.0002*	**0.0036**	*<0.0004*	**0.0939**	-	*<0.0004*	*<0.001*	*<0.0002*	*<0.0008*	*<0.0002*	**0.0005**	*<0.0004*	*<0.0002*	*<0.0002*	*<0.0010*	*<0.0010*	*<0.0005*
QLD_0861_PFASOMP_24	SD049	0861_QC202_240410	10 Apr 2024	RN1427801	-	*<0.001*	*<0.001*	*<0.001*	*<0.001*	**0.069**	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
QLD_0861_PFASOMP_24	SD049	0861_SD049_240410	10 Apr 2024	EB2413910	**56.8**	*<0.0005*	*<0.0005*	**0.0026**	*<0.0005*	**0.0848**	-	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFAS	SD050	0861_SED50_0.3_170530	30 May 2017	ES1713428	**33.6**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0017**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD050	0861_SED50_0_170530	30 May 2017	ES1713428	**27.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0003**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD050	0861_SD050_0.0_190501	01 May 2019	EB1911384	**49.8**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0052**	-	*<0.0005*	*<0.001*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFAS	SD050	0861_SD050_0.0_191118	18 Nov 2019	EB1931427	**28.1**	*<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*
QLD_0861_PFASOMP	SD050	0861_SD050_200415	15 Apr 2020	EB2010666-AE	**74.7**	**0.0021**	**0.0016**	**0.0135**	*<0.0010*	**0.0190**	-	*<0.0010*	*<0.001*	**0.0066**	**0.0094**	**0.0035**	**0.0014**	**0.0012**	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*
QLD_0861_PFASOMP	SD050	0861_SD050_201014	14 Oct 2020	EB2027172	**64.6**	*<0.0010*	*<0.0010*	**0.0018**	*<0.0010*	**0.0318**	-	**0.0013**	*<0.005*	**0.0011**	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*
QLD_0861_PFASOMP	SD050	0861_SD050_210414	14 Apr 2021	EB2111116	**44.3**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0094**	-	*<0.0005*	*<0.002*	*<0.0010*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD050	0861_SD050_211019	19 Oct 2021	EB2130835	**37.0**	*<0.0002*	*<0.0002*	**0.0004**	*<0.0002*	**0.0030**	-	*<0.0064*	*<0.001*	**0.0003**	**0.0003**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0006**	*<0.0005*
QLD_0861_PFASOMP	SD050	0861_SD050_220401	01 Apr 2022	EB2209950	**56.2**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0017**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0003**	**0.0004**	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD050	0861_SD050_230511	11 May 2023	EB2314270	**56.9**	*<0.0002*	*<0.0002*	**0.0021**	*<0.0002*	**0.0176**	-	*<0.0002*	*<0.001*	*<0.0002*	**0.0002**	*<0.0002*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD050	0861_SD050_231024	24 Oct 2023	EB2333894-AA	**44.6**	*<0.0002*	*<0.0002*	**0.0008**	*<0.0002*	**0.0086**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_24	SD050	0861_SD050_240411	11 Apr 2024	EB2413910	**35.5**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0024*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD051	0861_SD51_0_170602	02 Jun 2017	EB1711373	**35.5**	*<0.0002*	*<0.0002*	**0.0011**	**0.0121**	**0.0037**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD051	0861_SD051_0.0_190501	01 May 2019	EB1911384	**52.5**	**0.0026**	*<0.0002*	**0.0021**	*<0.0002*	**0.0290**	-	*<0.0002*	*<0.001*	**0.0007**	**0.0010**	**0.0003**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0004*	*<0.0003*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD051	0861_SD051_0.0_191118	18 Nov 2019	EB1931427	**63.5**	**0.0005**	*<0.0002*	**0.0013**	*<0.0002*	**0.0100**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0004**	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD051	0861_SD051_200415	15 Apr 2020	EB2010666-AE	**38.2**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0016**	-	*<0.0002*	*<0.001*	**0.0003**	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD051	0861_SD051_201014	14 Oct 2020	EB2027172	**40.0**	*<0.0005*	*<0.0005*	**0.0010**	*<0.0005*	**0.0053**	-	*<0.0005*	*<0.002*	**0.0016**	**0.0010**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD051	0861_SD051_210413	13 Apr 2021	EB2111116	**45.4**	*<0.0002*	*<0.0002*	**0.0013**	**0.0002**	**0.0384**	-	**0.0020**	*<0.001*	**0.0004**	**0.0004**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0005**	**0.0002**	*<0.0005*
QLD_0861_PFASOMP	SD051	0861_SD051_211019	19 Oct 2021	EB2130835	**41.6**	*<0.0005*	*<0.0005*	**0.0009**	*<0.0005*	**0.0078**	-	*<0.0005*	*<0.002*	**0.0011**	**0.0010**	*<0.0008*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD051	0861_SD051_220401	01 Apr 2022	EB2209950	**31.0**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0004**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD051	0861_SD051_221020	20 Oct 2022	EB2231197	**34.5**	*<0.0002*	*<0.0002*	**0.0015**	*<0.0002*	**0.0110**	-	**0.0010**	*<0.001*	**0.0006**	**0.0007**	**0.0005**	**0.0003**	*<0.0002*	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD051	0861_SD051_230419	19 Apr 2023	EB2312062-AA	**37.0**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0047**	-	**0.0004**	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD051	0861_SD051_231024	24 Oct 2023	EB2333894-AA	**15.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0015**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_24	SD051	0861_SD051_240411	11 Apr 2024	EB2413910	**32.4**	*<0.0002*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0052*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD052	0861_QC01_SED_170530	30 May 2017	ES1713428	**30.5**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0006**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD052	0861_QC02_SED_170530	30 May 2017	168440	-	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	**0.0007**	-	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.005*	*<0.005*
QLD_0861_PFAS	SD052	0861_QC03_SED_170530	30 May 2017	ES1713428	**43.0**	*<0.0002*	*<0.0002*	*<0.0002*	**0.0004**	**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*
QLD_0861_PFAS	SD052	0861_QC04_SED_170530	30 May 2017	168440	-	*<0.0001*	*<0.0001*	*<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*	*<0.005*	*<0.005*
QLD_0861_PFAS	SD052	0861_SED52_0.3_170530	30 May 2017	ES1713428	**40.3**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0015**	**0.0007**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD052	0861_SED52_0_170530	30 May 2017	ES1713428	**35.7**	*<0.0002*	*<0.0002*	*<0.0002*	**0.0010**	*<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*
QLD_0861_PFAS	SD052	0861_SD052_0.0_190510	10 May 2019	EB1911952	**31.1**	*<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*
QLD_0861_PFAS	SD052	0861_SD052_191121	21 Nov 2019	EB1931427	**34.2**	*<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*
QLD_0861_PFASOMP	SD052	0861_SD052_200420	20 Apr 2020	EB2011246-AC	**37.3**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0011**	-	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0011*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD052	0861_SD052_201013	13 Oct 2020	EB2027172	**57.7**	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0030*	-	*<0.0010*	*<0.005*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*
QLD_0861_PFASOMP	SD052	0861_SD052_210413	13 Apr 2021	EB2111116	**29.4**	*<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*
QLD_0861_PFASOMP	SD052	0861_SD052_211020	20 Oct 2021	EB2130835	**48.5**	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	-	*<0.0012*	*<0.006*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*
QLD_0861_PFASOMP	SD052	0861_SD052_220331	31 Mar 2022	EB2209950	**44.8**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0005**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0002**	**0.0002**	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD052	0861_SD052_221019	19 Oct 2022	EB2231197	**32.8**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0006*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD052	0861_SD052_230426	26 Apr 2023	EB2312761-AA	**40.8**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0015**	-	*<0.0002*	*<0.001*	*<0.0002*	**0.0005**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0006*
QLD_0861_PFASOMP_23	SD052	0681_QC104_231023	23 Oct 2023	EB2333894-AA	**31.1**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0022*	-	*<0.0002*	*<0.002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP_23	SD052	0861_QC204_231023	23 Oct 2023	RN1410504	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_23	SD052	0861_SD052_231023	23 Oct 2023	EB2333894-AA	**16.1**	<0.0010	<0.0010	<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
QLD_0861_PFASOMP_24	SD052	0861_SD052_240410	10 Apr 2024	EB2413910	**50.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD053	0861_SD053_0.55_171020	17 Oct 2017	EB1721894	**28.6**	<0.0002	<0.0002	**0.0005**	<0.0002	**0.0058**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD053	0861_SD053_0_171020	17 Oct 2017	EB1721894	**42.9**	**0.0004**	**0.0005**	**0.0095**	**0.0010**	**0.0308**	-	<0.0002	<0.001	<0.0002	**0.0036**	**0.0006**	**0.0007**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD053	SD053_191203	03 Dec 2019	EB1932627	**31.9**	<0.0002	<0.0002	**0.0003**	<0.0002	**0.0017**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD053	0861_SD053_200421	21 Apr 2020	EB2011246-AC	**24.3**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0024**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD053	0861_SD053_201021	21 Oct 2020	EB2027539	**24.8**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0020**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD053	0861_SD053_210419	19 Apr 2021	EB2111116	**37.4**	<0.0002	<0.0002	**0.0012**	<0.0002	**0.0077**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD053	0861_SD053_211025	25 Oct 2021	EB2130835	**29.3**	<0.0002	<0.0002	**0.0007**	<0.0002	**0.0350**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP	SD053	0861_SD053_220406	06 Apr 2022	EB2209951	**16.6**	<0.0002	<0.0002	**0.0004**	<0.0002	**0.0020**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD053	0861_SD053_221024	24 Oct 2022	EB2231825	**35.8**	<0.0002	<0.0002	**0.0013**	<0.0002	**0.0091**	-	<0.0002	<0.001	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD053	0861_SD053_230420	21 Apr 2023	EB2312062-AA	**76.9**	<0.0002	**0.0003**	**0.0023**	**0.0003**	**0.0219**	-	<0.0002	<0.001	<0.0002	**0.0003**	<0.0002	**0.0002**	<0.0002	<0.0002	**0.0003**	**0.0003**	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD053	0861_SD053_231129	29 Nov 2023	EB2337879-AA	**52.8**	**0.0005**	**0.0003**	**0.0024**	<0.0002	**0.0129**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD053	0861_SD053_240418	18 Apr 2024	EB2413910	**90.7**	<0.0005	**0.0005**	**0.0033**	<0.0010	<0.0476	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	**0.0012**	<0.0005	<0.0006	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFAS	SD056	0861_QC102_170913	13 Sep 2017	EB1719017	**81.5**	**0.0022**	**0.0022**	**0.0237**	**0.0030**	**0.345**	-	**0.0052**	<0.001	<0.0002	**0.0041**	**0.0006**	**0.0015**	<0.0002	**0.0005**	**0.0021**	**0.0024**	**0.0004**	<0.0006
QLD_0861_PFAS	SD056	0861_QC202_170915	13 Sep 2017	175963	**50**	**0.0004**	**0.0005**	**0.0052**	**0.0007**	**0.35**	-	**0.001**	<0.0002	<0.0002	**0.0007**	<0.0001	**0.0005**	<0.0001	<0.0005	**0.001**	**0.0005**	<0.005	
QLD_0861_PFAS	SD056	0861_SD056_0.4_170913	13 Sep 2017	EB1719017	**39.9**	**0.0003**	**0.0004**	**0.0077**	**0.0019**	**1.13**	-	**0.0015**	<0.001	<0.0002	**0.0018**	**0.0002**	**0.0009**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD056	0861_SD056_0_170913	13 Sep 2017	EB1719017	**58.8**	**0.0003**	**0.0002**	**0.0050**	**0.0008**	**0.374**	-	**0.0014**	<0.001	<0.0002	**0.0009**	<0.0002	**0.0003**	<0.0002	<0.0002	**0.0002**	**0.0003**	<0.0002	<0.0005
QLD_0861_PFAS	SD056	0861_SD056_0.0_190501	01 May 2019	EB1911384	**78.5**	**0.0010**	**0.0010**	**0.0141**	**0.0016**	**0.374**	-	**0.0016**	<0.001	**0.0013**	**0.0031**	**0.0007**	**0.0017**	**0.0004**	**0.0015**	**0.0019**	**0.0037**	**0.0004**	**0.0010**
QLD_0861_PFAS	SD056	0861_SD056_0.3_190501	01 May 2019	EB1911384	**62.8**	**0.0008**	**0.0012**	**0.0141**	**0.0014**	**0.322**	-	**0.0020**	<0.001	**0.0010**	**0.0026**	**0.0007**	**0.0018**	**0.0005**	**0.0010**	**0.0007**	**0.0009**	<0.0002	<0.0005
QLD_0861_PFAS	SD056	0861_QC102_191118	18 Nov 2019	EB1931427	**36.8**	**0.0004**	**0.0003**	**0.0032**	**0.0002**	**0.0289**	-	<0.0002	<0.001	**0.0006**	**0.0010**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD056	0861_QC201_191118	18 Nov 2019	231783	**41**	**0.0004**	**0.0005**	**0.0068**	**0.0006**	**0.086**	-	**0.002**	**0.0002**	**0.0004**	**0.0012**	**0.0002**	**0.0004**	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
QLD_0861_PFAS	SD056	0861_SD056_0.0_191118	18 Nov 2019	EB1931427	**42.3**	**0.0004**	**0.0004**	**0.0038**	**0.0003**	**0.0332**	-	<0.0002	<0.001	**0.0005**	**0.0010**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD056	0861_SD056_0.3_191118	18 Nov 2019	EB1931427	**35.8**	**0.0004**	**0.0003**	**0.0035**	**0.0002**	**0.0320**	-	**0.0002**	<0.001	**0.0004**	**0.0009**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD056	0861_QC105_200415	15 Apr 2020	EB2010666-AE	**61.9**	<0.0010	**0.0010**	**0.0154**	**0.0013**	**0.0973**	-	<0.0010	<0.001	**0.0013**	**0.0039**	**0.0016**	**0.0027**	<0.0010	**0.0012**	**0.0016**	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD056	0861_QC205_200415	15 Apr 2020	RN1271947	-	**0.0014**	**0.0010**	**0.013**	<0.001	**0.21**	**0.0019**	<0.001	<0.002	<0.002	**0.0032**	**0.0012**	**0.0024**	**0.0011**	**0.0020**	<0.002	**0.0030**	<0.002	<0.002
QLD_0861_PFASOMP	SD056	0861_QC205_200415	15 Apr 2020	RN1274650	-	**0.0014**	**0.001**	**0.013**	<0.001	**0.21**	**0.0019**	<0.001	<0.002	<0.002	**0.0032**	**0.0012**	**0.0024**	**0.0011**	**0.002**	<0.002	**0.003**	<0.002	<0.002
QLD_0861_PFASOMP	SD056	0861_SD056_200415	15 Apr 2020	EB2010666-AE	**62.3**	<0.0010	**0.0010**	**0.0131**	<0.0010	**0.0676**	-	<0.0010	<0.001	**0.0018**	**0.0038**	**0.0017**	**0.0020**	**0.0010**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD056	0861_SD056_201019	19 Oct 2020	EB2027539	**66.3**	**0.0012**	**0.0011**	**0.0126**	**0.0013**	**0.130**	-	**0.0015**	<0.001	**0.0009**	**0.0022**	**0.0004**	**0.0010**	**0.0002**	**0.0004**	**0.0008**	**0.0014**	**0.0004**	<0.0005
QLD_0861_PFASOMP	SD056	0861_SD056_210330	30 Mar 2021	EB2108857	**63.4**	<0.0010	**0.0014**	**0.0302**	**0.0091**	**0.611**	-	<0.0010	<0.005	**0.0041**	**0.0058**	**0.0035**	**0.0068**	**0.0036**	**0.0031**	**0.0018**	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD056	0861_SD056_211026	26 Oct 2021	EB2130850	**52.1**	<0.0010	<0.0010	**0.0083**	**0.0012**	**0.629**	-	**0.0030**	<0.005	**0.0014**	**0.0021**	<0.0010	**0.0012**	<0.0010	<0.0010	**0.0012**	**0.0015**	<0.0010	<0.0025
QLD_0861_PFASOMP	SD056	0861_SD056_220328	28 Mar 2022	EB2209950	**65.3**	**0.0028**	**0.0029**	**0.108**	**0.0604**	**1.82**	-	**0.0038**	<0.002	**0.0036**	**0.0080**	**0.0023**	**0.0155**	**0.0027**	**0.0014**	**0.0021**	**0.0019**	**0.0006**	<0.0012
QLD_0861_PFASOMP	SD056	0861_QC190_221021	21 Oct 2022	EB2231197	**72.4**	**0.0161**	**0.0291**	**0.426**	**0.0049**	**0.372**	-	**0.0044**	**0.007**	**0.0158**	**0.0638**	**0.0292**	**0.0246**	**0.0022**	**0.0028**	**0.0025**	**0.0024**	**0.0007**	<0.0005
QLD_0861_PFASOMP	SD056	0861_QC290_221021	21 Oct 2022	RN1370747	-	**0.0067**	**0.017**	**0.34**	**0.0016**	**0.21**	<0.001	<0.001	**0.0041**	**0.0085**	**0.031**	**0.017**	**0.012**	**0.001**	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD056	0861_SD056_221021	21 Oct 2022	EB2231197	**72.2**	**0.0123**	**0.0327**	**0.418**	<0.0042	**0.330**	-	<0.0032	<0.004	**0.0144**	**0.0605**	**0.0278**	**0.0191**	**0.0017**	**0.0016**	**0.0016**	<0.0008	<0.0005	<0.0012
QLD_0861_PFASOMP_23	SD056	0861_SD056_230418	18 Apr 2023	EB2312062-AA	**73.8**	**0.0015**	**0.0016**	**0.0188**	**0.0023**	**0.168**	-	**0.0030**	<0.001	**0.0021**	**0.0036**	**0.0012**	**0.0023**	**0.0004**	**0.0006**	**0.0025**	**0.0042**	**0.0009**	**0.0007**
QLD_0861_PFASOMP_23	SD056	0861_SD056_231024	24 Oct 2023	EB2333894-AA	**91.8**	**0.0097**	**0.0082**	**0.0609**	**0.0050**	**0.360**	-	<0.0028	**0.006**	**0.0109**	**0.0177**	**0.0040**	**0.0075**	**0.0011**	**0.0010**	**0.0011**	**0.0024**	**0.0010**	<0.0013
QLD_0861_PFASOMP_24	SD056	0861_SD056_240409	09 Apr 2024	EB2413910	**34.9**	<0.0010	<0.0010	**0.0066**	<0.0010	**0.427**	-	<0.0030	<0.005	<0.0010	**0.0014**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFAS	SD059	0861_SD059_0.3_170913	13 Sep 2017	EB1719017	**21.2**	<0.0002	<0.0002	**0.0008**	<0.0002	**0.0011**	-	<0.0002	<0.001	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD059	0861_SD059_0_170913	13 Sep 2017	EB1719017	**26.4**	<0.0002	<0.0002	**0.0010**	<0.0002	**0.0080**	-	<0.0002	<0.001	<0.0002	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD059	0861_SD059_0.0_190429	29 Apr 2019	EB1911384	**33.9**	**0.0008**	**0.0010**	**0.0078**	**0.0007**	**0.0738**	-	<0.0002	<0.001	**0.0008**	**0.0026**	**0.0005**	**0.0017**	**0.0003**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD059	0861_SD059_200415	15 Apr 2020	EB2010666-AE	**29.2**	**0.0018**	**0.0013**	**0.0086**	<0.0005	**0.0336**	-	<0.0005	<0.001	**0.0018**	**0.0043**	**0.0007**	**0.0016**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD059	0861_SD059_201016	16 Oct 2020	EB2027176-AA	**5.0**	**0.0033**	**0.0038**	**0.0236**	**0.0021**	**0.132**	-	**0.0030**	<0.002	**0.0033**	**0.0085**	**0.0021**	**0.0044**	**0.0008**	**0.0010**	**0.0011**	**0.0011**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD059	0861_SD059_210330	30 Mar 2021	EB2108857	**48.0**	**0.0022**	**0.0020**	**0.0199**	**0.0024**	**0.244**	-	**0.0013**	<0.002	**0.0036**	**0.0059**	**0.0020**	**0.0046**	**0.0012**	**0.0014**	**0.0014**	**0.0008**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD059	0861_SD059_211026	26 Oct 2021	EB2130850	**38.3**	**0.0011**	**0.0013**	**0.0145**	**0.0018**	**0.106**	-	**0.0070**	<0.001	**0.0029**	**0.0037**	**0.0011**	**0.0033**	**0.0009**	**0.0006**	**0.0010**	**0.0007**	<0.0002	<0.0006
QLD_0861_PFASOMP	SD059	0861_SD059_220328	28 Mar 2022	EB2209950	**51.5**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD059	0861_SD059_221021	21 Oct 2022	EB2231197	**91.2**	**0.0064**	**0.0067**	**0.0751**	**0.0110**	**1.02**	-	**0.0299**	**0.005**	<0.0005	**0.0178**	**0.0059**	**0.0156**	**0.0043**	**0.0048**	**0.0068**	**0.0059**	**0.0010**	<0.0012
QLD_0861_PFASOMP_23	SD059	0861_QC107_230417	17 Apr 2023	EB2312062-AA	**48.0**	**0.0006**	**0.0004**	**0.0046**	**0.0004**	**0.0365**	-	**0.0011**	<0.001	**0.0009**	**0.0013**	**0.0004**	**0.0007**	<0.0002	<0.0002	<0.0002	**0.0005**	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD059	0861_QC207_230417	17 Apr 2023	RN1393124	-	<0.001	<0.001	**0.004**	<0.001	**0.035**	<0.001	<0.001	<0.002	<0.002	**0.0017**	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_23	SD059	0861_SD059_230417	17 Apr 2023	EB2312062-AA	**46.3**	**0.0002**	**0.0002**	**0.0015**	<0.0002	**0.0091**	-	<0.0002	<0.001	**0.0005**	**0.0008**	**0.0002**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD059	0861_SD059_231027	27 Oct 2023	EB2333894-AA	**73.6**	**0.0023**	**0.0035**	**0.0412**	**0.0047**	**0.378**	-	**0.0112**	**0.001**	<0.0044	**0.0048**	**0.0018**	**0.0073**	**0.0016**	**0.0012**	**0.0016**	**0.0022**	**0.0006**	<0.0005
QLD_0861_PFASOMP_24	SD059	0861_SD059_240409	09 Apr 2024	EB2413910	**77.7**	**0.0025**	**0.0039**	**0.0372**	**0.0058**	**0.588**	-	**0.0105**	<0.003	**0.0043**	**0.0086**	**0.0026**	**0.0070**	**0.0014**	**0.0019**	**0.0022**	<0.0034	<0.0006	<0.0016
QLD_0861_PFAS	SD064	0861_SD064_0.2_171019	19 Oct 2017	EB1721835	**32.9**	**0.0012**	**0.0011**	**0.0133**	**0.0016**	**0.107**	-	**0.0003**	<0.001	**0.0007**	**0.0034**	**0.0005**	**0.0014**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD064	0861_SD064_0_171019	19 Oct 2017	EB1721835	**32.2**	**0.0010**	**0.0010**	**0.0087**	**0.0008**	**0.0334**	-	**0.0004**	<0.001	**0.0006**	**0.0021**	**0.0003**	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD064	0861_SD64_0.0_190513	13 May 2019	EB1912390	**35.8**	**0.0005**	**0.0004**	**0.0066**	**0.0004**	**0.0743**	-	**0.0004**	<0.001	**0.0005**	**0.0018**	**0.0003**	**0.0006**	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD064	0861_SD064_200421	21 Apr 2020	EB2011246-AC	**21**	<0.0005	<0.0005	**0.006**	<0.0005	**0.0273**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD064	0861_SD064_201021	21 Oct 2020	EB2027539	**14.3**	**0.0016**	**0.0015**	**0.0124**	**0.0009**	**0.0369**	-	**0.0013**	<0.001	**0.0014**	**0.0029**	**0.0004**	**0.0008**	**0.0004**	**0.0003**	**0.0002**	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD064	0861_SD064_210419	19 Apr 2021	EB2111116	**51.6**	<0.0010	<0.0010	**0.0070**	<0.0010	**0.106**	-	<0.0018	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD064	0861_SD064_211025	25 Oct 2021	EB2130835	**51.1**	**0.0007**	**0.0008**	**0.0090**	**0.0009**	**0.0945**	-	**0.0017**	<0.003	**0.0010**	**0.0026**	**0.0004**	**0.0011**	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD064	0861_SD064_220406	06 Apr 2022	EB2209951	**57.6**	**0.0007**	**0.0006**	**0.0062**	**0.0005**	**0.0770**	-	**0.0014**	<0.001	**0.0006**	**0.0011**	**0.0002**	**0.0007**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD064	0861_SD064_221024	24 Oct 2022	EB2231825	**53.3**	**0.0016**	**0.0020**	**0.0201**	**0.0023**	**0.293**	-	**0.0041**	<0.002	<0.0005	**0.0016**	<0.0005	**0.0007**	<0.0005	<0.0005	<0.0005	**0.0015**	<0.0005	<0.0012
QLD_0861_PFASOMP_23	SD064	0861_SD064_230420	21 Apr 2023	EB2312062-AA	**71.3**	**0.0016**	**0.0013**	**0.0148**	**0.0017**	**0.190**	-	**0.0031**	<0.001	**0.0013**	**0.0019**	**0.0003**	**0.0011**	<0.0002	**0.0006**	**0.0005**	**0.0004**	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD064	0861_SD064_231129	29 Nov 2023	EB2337879-AA	**73.2**	**0.0014**	<0.0014	**0.0126**	**0.0013**	**0.219**	-	**0.0026**	<0.002	**0.0014**	**0.0011**	<0.0005	**0.0010**	<0.0005	<0.0005	<0.0008	**0.0010**	<0.0005	<0.0012
QLD_0861_PFASOMP_24	SD064	0861_SD064_240418	18 Apr 2024	EB2413910	**58.5**	**0.0010**	**0.0012**	**0.0114**	**0.0010**	**0.125**	-	**0.0025**	<0.001	**0.0002**	**0.0011**	**0.0002**	**0.0007**	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD067	0861_SD067_0.1_171020	17 Oct 2017	EB1721894	**12.6**	**0.0015**	**0.0017**	**0.0252**	**0.0040**	**1.90**	-	**0.0037**	<0.001	**0.0016**	**0.0067**	**0.0011**	**0.0035**	**0.0038**	**0.0020**	**0.0005**	**0.0005**	<0.0002	<0.0005
QLD_0861_PFAS	SD067	0861_SD067_0_171020	17 Oct 2017	EB1721894	**15.2**	<0.0002	<0.0002	**0.0005**	<0.0002	**0.0041**	-	<0.0002	<0.001	<0.0002	**0.0002**	<0.0002	**0.0003**	**0.0002**	**0.0006**	**0.0021**	**0.0046**	**0.0011**	**0.0011**
QLD_0861_PFAS	SD067	0861_SD67_0.0_190513	13 May 2019	EB1912390	**49.9**	**0.0098**	**0.0144**	**0.138**	**0.0115**	**1.07**	-	**0.0066**	**0.004**	**0.0075**	**0.0370**	**0.0038**	**0.0127**	**0.0041**	**0.0070**	**0.0086**	**0.0109**	**0.0021**	**0.0016**
QLD_0861_PFASOMP	SD067	0861_SD067_200421	21 Apr 2020	EB2011246-AC	**22**	**0.0042**	**0.0045**	**0.0479**	<0.0025	**0.0869**	-	<0.0025	<0.012	<0.0025	**0.0067**	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0062
QLD_0861_PFASOMP	SD067	0861_SD067_201021	21 Oct 2020	EB2027539	**8.1**	**0.0089**	**0.0110**	**0.0360**	**0.0047**	**0.134**	-	**0.0085**	**0.003**	**0.0050**	**0.0145**	**0.0009**	**0.0020**	**0.0004**	**0.0005**	**0.0010**	**0.0023**	**0.0007**	**0.0009**
QLD_0861_PFASOMP	SD067	0861_SD067_210419	19 Apr 2021	EB2111116	**32.3**	**0.0015**	**0.0017**	**0.0228**	**0.0027**	**0.318**	-	**0.0112**	<0.002	**0.0008**	**0.0020**	<0.0005	**0.0008**	**0.0006**	**0.0009**	**0.0014**	**0.0027**	**0.0009**	<0.0012
QLD_0861_PFASOMP	SD067	0861_SD067_211025	25 Oct 2021	EB2130835	**51.3**	**0.0068**	**0.0095**	**0.0926**	**0.0085**	**0.780**	-	**0.0183**	**0.008**	**0.0099**	**0.0314**	**0.0045**	**0.0116**	**0.0086**	**0.0078**	**0.0056**	**0.0078**	**0.0020**	<0.0024
QLD_0861_PFASOMP	SD067	0861_SD067_220406	06 Apr 2022	EB2209951	**59.2**	**0.0057**	**0.0091**	**0.0736**	**0.0056**	**0.748**	-	**0.0233**	**0.003**	**0.0060**	**0.0191**	**0.0030**	**0.0056**	**0.0033**	**0.0055**	**0.0069**	**0.0092**	**0.0020**	**0.0012**
QLD_0861_PFASOMP	SD067	0861_SD067_221024	24 Oct 2022	EB2231825	**67.1**	**0.0037**	**0.0043**	**0.0481**	**0.0037**	**0.528**	-	**0.0197**	**0.002**	**0.0050**	**0.0136**	**0.0015**	**0.0026**	**0.0018**	**0.0034**	**0.0061**	**0.0100**	**0.0024**	<0.0012
QLD_0861_PFASOMP_23	SD067	0861_SD067_230420	21 Apr 2023	EB2312062-AA	**57.1**	**0.0079**	**0.0079**	**0.0658**	**0.0052**	**0.320**	-	**0.0071**	<0.002	**0.0037**	**0.0085**	**0.0006**	**0.0016**	**0.0005**	**0.0006**	**0.0013**	**0.0022**	**0.0010**	<0.0012
QLD_0861_PFASOMP_23	SD067	0861_SD067_231129	29 Nov 2023	EB2337879-AA	**82.1**	**0.0094**	**0.0110**	**0.126**	**0.0094**	**1.28**	-	**0.0204**	<0.025	**0.0127**	**0.0220**	<0.0049	**0.0099**	<0.0049	**0.0066**	**0.0121**	**0.0281**	**0.0088**	<0.0123
QLD_0861_PFASOMP_24	SD067	0861_SD067_240418	18 Apr 2024	EB2413910	**53.6**	**0.0076**	**0.0136**	**0.145**	**0.0098**	**1.68**	-	**0.0450**	<0.025	<0.0050	**0.0271**	<0.0050	**0.0076**	<0.0050	<0.0050	**0.0065**	**0.0076**	<0.0050	<0.0126
QLD_0861_PFAS	SD076	0861_SD076_SD_0.4_170912	13 Sep 2017	EB1718855	**20.1**	**0.0007**	**0.0004**	**0.0027**	<0.0002	**0.0214**	-	<0.0002	<0.001	**0.0007**	**0.0016**	**0.0003**	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD076	0861_SD076_SD_0_170912	13 Sep 2017	EB1718855	**32.1**	<0.0002	<0.0002	**0.0013**	<0.0002	**0.0055**	-	<0.0002	<0.001	**0.0003**	**0.0008**	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD076	0861_SD076_0.0_190501	01 May 2019	EB1911384	**53.8**	**0.0004**	**0.0005**	**0.0060**	**0.0005**	**0.0652**	-	**0.0004**	<0.001	**0.0009**	**0.0013**	**0.0004**	**0.0009**	**0.0002**	**0.0004**	**0.0005**	**0.0002**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD076	0861_SD076_200415	15 Apr 2020	EB2010666-AE	**64.1**	**0.0011**	**0.0012**	**0.0116**	<0.0010	**0.0772**	-	<0.0010	<0.001	**0.0107**	**0.0190**	**0.0044**	**0.0030**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD076	0861_SD076_201016	16 Oct 2020	EB2027176-AA	**5.6**	**0.0017**	**0.0016**	**0.0098**	**0.0007**	**0.0300**	-	**0.0008**	<0.005	**0.0092**	**0.0072**	**0.0021**	**0.0021**	**0.0006**	**0.0006**	**0.0010**	**0.0014**	**0.0002**	<0.0005
QLD_0861_PFASOMP	SD076	0861_SD076_210330	30 Mar 2021	EB2108857	**66.1**	**0.0013**	**0.0012**	**0.0131**	**0.0013**	**0.0795**	-	<0.0010	<0.005	**0.0035**	**0.0038**	**0.0012**	**0.0016**	<0.0010	<0.0010	**0.0016**	**0.0022**	<0.0010	<0.0025
QLD_0861_PFASOMP	SD076	0861_SD076_211026	26 Oct 2021	EB2130850	**52.0**	**0.0004**	**0.0005**	**0.0063**	**0.0011**	**0.117**	-	**0.0022**	<0.001	**0.0009**	**0.0016**	**0.0005**	**0.0015**	**0.0008**	**0.0007**	**0.0009**	**0.0005**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD076	0861_SD076_220328	28 Mar 2022	EB2209950	**82.0**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0020**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0004	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP_23	SD076	0861_SD076_230418	18 Apr 2023	EB2312062-AA	**49.1**	**0.0004**	**0.0003**	**0.0048**	**0.0006**	**0.0359**	-	**0.0002**	<0.001	**0.0007**	**0.0008**	**0.0003**	**0.0005**	**0.0002**	**0.0003**	**0.0005**	**0.0009**	**0.0006**	<0.0005
QLD_0861_PFASOMP_23	SD076	0861_SD076_231027	27 Oct 2023	EB2333894-AA	**89.8**	**0.0062**	**0.0056**	**0.0480**	**0.0049**	**0.428**	-	**0.0044**	**0.004**	**0.0062**	**0.0113**	**0.0026**	**0.0067**	**0.0013**	**0.0014**	**0.0018**	**0.0037**	**0.0012**	<0.0006
QLD_0861_PFASOMP_24	SD076	0861_SD076_240409	09 Apr 2024	EB2413910	**54.8**	**0.0013**	**0.0014**	**0.0119**	**0.0012**	**0.0810**	-	**0.0018**	**0.001**	**0.0022**	**0.0039**	**0.0014**	**0.0021**	**0.0004**	<0.0002	**0.0005**	**0.0009**	**0.0003**	<0.0005
QLD_0861_PFAS	SD079	0861_SD079_0.2_171020	17 Oct 2017	EB1721894	**36.2**	<0.0002	<0.0002	**0.0011**	<0.0002	**0.0115**	-	<0.0002	<0.001	<0.0002	**0.0008**	**0.0002**	**0.0004**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD079	0861_SD079_0_171020	17 Oct 2017	EB1721894	**31.2**	**0.0007**	**0.0009**	**0.0140**	**0.0009**	**0.0262**	-	<0.0002	<0.001	<0.0002	**0.0015**	**0.0003**	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD079	0861_SD079_200421	21 Apr 2020	EB2011246-AC	**18.4**	**0.0026**	**0.0027**	**0.0151**	**0.0013**	**0.0229**	-	<0.0002	<0.001	**0.0008**	**0.0038**	**0.0004**	**0.001**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD079	0861_SD079_201021	21 Oct 2020	EB2027539	**19.7**	**0.0021**	**0.0024**	**0.0190**	**0.0017**	**0.0468**	-	<0.0002	<0.001	**0.0009**	**0.0037**	**0.0005**	**0.0010**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD079	0861_QC146_210419	19 Apr 2021	EB2111121	**64.9**	**0.0031**	**0.0038**	**0.0688**	**0.0114**	**0.611**	-	**0.0084**	<0.005	**0.0018**	**0.0063**	<0.0012	**0.0046**	<0.0010	**0.0011**	**0.0024**	**0.0042**	<0.0010	<0.0025
QLD_0861_PFASOMP	SD079	0861_QC246_210419	19 Apr 2021	RN1313031	-	**0.001**	**0.0014**	**0.021**	**0.0031**	**0.2**	<0.001	<0.001	<0.002	<0.002	**0.0015**	<0.001	**0.0018**	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD079	0861_SD079_210419	19 Apr 2021	EB2111116	**54.7**	**0.0016**	**0.0023**	**0.0237**	**0.0030**	**0.230**	-	**0.0017**	<0.005	**0.0014**	**0.0032**	<0.0010	<0.0010	<0.0010	<0.0010	**0.0012**	**0.0016**	<0.0010	<0.0025
QLD_0861_PFASOMP	SD079	0861_SD079_211025	25 Oct 2021	EB2130835	**28.9**	<0.0002	<0.0002	**0.0013**	<0.0002	**0.0162**	-	**0.0004**	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	<0.0005
QLD_0861_PFASOMP	SD079	0861_SD079_220406	06 Apr 2022	EB2209951	**44.6**	<0.0005	<0.0005	**0.0165**	**0.0022**	**0.180**	-	<0.0014	<0.013	<0.0005	**0.0011**	<0.0005	<0.0008	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD079	0861_SD079_221024	24 Oct 2022	EB2231825	**69.2**	<0.0005	**0.0009**	**0.0199**	**0.0030**	**0.262**	-	**0.0040**	<0.002	**0.0008**	**0.0015**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0009**	**0.0007**	<0.0005	<0.0012
QLD_0861_PFASOMP_23	SD079	0861_SD079_230420	21 Apr 2023	EB2312062-AA	**94.7**	**0.0201**	**0.0248**	**0.236**	**0.0308**	**1.70**	-	**0.0179**	**0.006**	**0.0107**	**0.0368**	**0.0056**	**0.0180**	<0.0016	**0.0024**	**0.0056**	**0.0096**	**0.0026**	<0.0025
QLD_0861_PFASOMP_23	SD079	0861_SD079_231129	29 Nov 2023	EB2337879-AA	**80.5**	<0.0012	<0.0016	**0.0218**	**0.0042**	**0.438**	-	**0.0052**	<0.006	**0.0022**	**0.0029**	<0.0012	**0.0018**	<0.0012	<0.0012	<0.0012	**0.0028**	<0.0012	<0.0031
QLD_0861_PFASOMP_24	SD079	0861_SD079_240418	18 Apr 2024	EB2413910	**41.9**	**0.0004**	**0.0007**	**0.0075**	**0.0006**	**0.0296**	-	**0.0004**	<0.001	<0.0002	**0.0008**	**0.0002**	**0.0005**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD080	0861_SD80_0.0_190513	13 May 2019	EB1912390	**48.2**	**0.0023**	**0.0032**	**0.0285**	**0.0022**	**0.162**	-	**0.0004**	<0.001	**0.0009**	**0.0044**	**0.0007**	**0.0020**	**0.0002**	**0.0006**	**0.0011**	**0.0024**	**0.0010**	**0.0008**
QLD_0861_PFAS	SD080	QC102_191203	03 Dec 2019	EB1932627	**71.4**	**0.0028**	**0.0016**	**0.0237**	**0.0036**	**0.197**	-	**0.0014**	<0.001	<0.0010	**0.0035**	<0.0010	<0.0010	**0.0010**	**0.0010**	**0.0014**	**0.0010**	<0.0010	<0.0025
QLD_0861_PFAS	SD080	SD080_191203	03 Dec 2019	EB1932627	**69.6**	**0.0016**	<0.0010	**0.0118**	**0.0016**	**0.104**	-	**0.0011**	<0.001	<0.0010	**0.0026**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD080	0861_SD080_200421	21 Apr 2020	EB2011246-AC	**7.4**	**0.0008**	**0.001**	**0.0113**	**0.0012**	**0.0852**	-	**0.0017**	<0.002	**0.0032**	**0.004**	<0.0036	**0.0016**	**0.0006**	**0.0024**	<0.0054	**0.0046**	<0.0005	<0.0012
QLD_0861_PFASOMP	SD080	0861_SD080_201021	21 Oct 2020	EB2027539	**25.5**	**0.0028**	**0.0041**	**0.0491**	**0.0072**	**0.153**	-	**0.0015**	<0.001	**0.0020**	**0.0059**	**0.0013**	**0.0055**	**0.0013**	**0.0020**	**0.0034**	**0.0047**	**0.0012**	**0.0015**
QLD_0861_PFASOMP	SD080	0861_SD080_210419	19 Apr 2021	EB2111116	**63.0**	**0.0063**	**0.0092**	**0.118**	**0.0156**	**0.806**	-	**0.0111**	<0.005	**0.0032**	**0.0123**	**0.0029**	**0.0090**	**0.0052**	**0.0103**	**0.0169**	**0.0140**	**0.0046**	**0.0029**
QLD_0861_PFASOMP	SD080	0861_SD080_211025	25 Oct 2021	EB2130835	**64.7**	**0.0036**	**0.0060**	**0.0954**	**0.0140**	**0.903**	-	**0.0240**	<0.005	**0.0021**	**0.0073**	**0.0024**	**0.0076**	**0.0048**	**0.0079**	**0.0270**	**0.0248**	**0.0091**	**0.0052**
QLD_0861_PFASOMP	SD080	0861_SD080_220406	06 Apr 2022	EB2209951	**45.8**	**0.0028**	**0.0040**	**0.0532**	**0.0067**	**0.339**	-	**0.0065**	<0.002	**0.0022**	**0.0057**	**0.0016**	**0.0051**	**0.0028**	**0.0035**	**0.0076**	**0.0087**	**0.0035**	**0.0018**
QLD_0861_PFASOMP	SD080	0861_SD080_221024	24 Oct 2022	EB2231825	**55.1**	**0.0028**	**0.0056**	**0.0704**	**0.0089**	**0.597**	-	**0.0127**	<0.005	**0.0038**	**0.0078**	**0.0043**	**0.0100**	**0.0146**	**0.0148**	**0.0189**	**0.0199**	**0.0097**	**0.0053**
QLD_0861_PFASOMP_23	SD080	0861_SD080_230420	21 Apr 2023	EB2312062-AA	**45.4**	**0.0021**	**0.0022**	**0.0199**	**0.0022**	**0.111**	-	**0.0014**	<0.001	**0.0008**	**0.0035**	**0.0005**	**0.0013**	<0.0002	**0.0002**	<0.0004	**0.0010**	**0.0009**	**0.0007**
QLD_0861_PFASOMP_23	SD080	0861_SD080_231129	29 Nov 2023	EB2337879-AA	**87.9**	**0.0046**	**0.0046**	**0.0426**	**0.0057**	**0.669**	-	**0.0126**	<0.006	**0.0029**	**0.0052**	<0.0013	**0.0040**	<0.0013	<0.0013	**0.0017**	**0.0046**	**0.0027**	<0.0032
QLD_0861_PFASOMP_24	SD080	0861_SD080_240418	18 Apr 2024	EB2413910	**38.4**	**0.0019**	**0.0030**	**0.0363**	**0.0043**	**0.222**	-	**0.0050**	**0.001**	**0.0030**	**0.0046**	**0.0028**	**0.0041**	**0.0028**	**0.0034**	**0.0072**	**0.0089**	**0.0036**	**0.0020**
QLD_0861_PFAS	SD088	0861_SD088_0.2_170915	15 Sep 2017	EB1719132	**29.0**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0004**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD088	0861_SD088_0_170915	15 Sep 2017	EB1719132	**35.9**	<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
QLD_0861_PFASOMP	SD088	0861_SD088_200420	20 Apr 2020	EB2011246-AC	**42**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0026	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD088	0861_QC122_201013	13 Oct 2020	EB2027176-AA	**54.6**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.007	<0.0014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD088	0861_QC222_201013	13 Oct 2020	RN1292029	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD088	0861_SD088_201013	13 Oct 2020	EB2027172	**57.6**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0014	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD088	0861_SD088_210413	13 Apr 2021	EB2111116	**37.0**	<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
QLD_0861_PFASOMP	SD088	0861_SD088_211020	20 Oct 2021	EB2130835	**36.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	-	<0.0003	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD088	0861_QC174_220331	31 Mar 2022	EB2209942	**29.3**	<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
QLD_0861_PFASOMP	SD088	0861_QC274_220331	31 Mar 2022	RN1349008	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP	SD088	0861_SD088_220331	31 Mar 2022	EB2209950	**28.7**	<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
QLD_0861_PFASOMP	SD088	0861_SD088_221019	19 Oct 2022	EB2231197	**58.7**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	<0.0020	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0050
QLD_0861_PFASOMP_23	SD088	0861_SD088_230522	22 May 2023	EB2315514	**38.3**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0006	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD088	0681_QC105_231023	23 Oct 2023	EB2333894-AA	**43.3**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD088	0861-_QC205_231023	23 Oct 2023	RN1410504	-	<0.001	<0.001	<0.001	<0.001	<0.002	<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
QLD_0861_PFASOMP_23	SD088	0861_SD088_231023	23 Oct 2023	EB2333894-AA	**40.5**	<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
QLD_0861_PFASOMP_24	SD088	0861_SD088_240410	10 Apr 2024	EB2413910	**45.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD089	0861_SD089_0.4_170914	14 Sep 2017	EB1719065	**37.6**	<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
QLD_0861_PFAS	SD089	0861_SD089_0_170914	14 Sep 2017	EB1719065	**36.1**	<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
QLD_0861_PFAS	SD089	0861_SD089_0.0_190510	10 May 2019	EB1911952	**38.3**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD089	0861_SD089_200420	20 Apr 2020	EB2011246-AC	**35.8**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0014	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD089	0861_SD089_201013	13 Oct 2020	EB2027172	**6.0**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0030	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD089	0861_SD089_210413	13 Apr 2021	EB2111116	**36.3**	<0.0005	<0.0005	<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	<0.0012
QLD_0861_PFASOMP	SD089	0861_SD089_211020	20 Oct 2021	EB2130835	**50.4**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0018	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0024
QLD_0861_PFASOMP	SD089	0861_SD089_220331	31 Mar 2022	EB2209950	**33.2**	<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
QLD_0861_PFASOMP	SD089	0861_SD089_221019	19 Oct 2022	EB2231197	**29.6**	<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
QLD_0861_PFASOMP_23	SD089	0861_SD089_230522	22 May 2023	EB2315514	**44.3**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0016	-	<0.0042	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD089	0861_SD089_231023	23 Oct 2023	EB2333894-AA	**37.6**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD089	0861_SD089_240410	10 Apr 2024	EB2413910	**31.7**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0022	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD090	0861_SD090_0.25_170914	14 Sep 2017	EB1719065	**30.2**	<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
QLD_0861_PFAS	SD090	0861_SD090_0_170914	14 Sep 2017	EB1719065	**31.3**	<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
QLD_0861_PFAS	SD090	0861_QC102_190510	10 May 2019	EB1911952	**41.9**	<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
QLD_0861_PFAS	SD090	0861_QC202_190510	10 May 2019	217521	**40**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0002**	-	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.005	<0.005	<0.01
QLD_0861_PFAS	SD090	0861_SD090_0.0_190510	10 May 2019	EB1911952	**37.3**	<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
QLD_0861_PFASOMP	SD090	0861_SD090_200420	20 Apr 2020	EB2011246-AC	**37.8**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0016	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD090	0861_SD090_201013	13 Oct 2020	EB2027172	**40.6**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0009	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013
QLD_0861_PFASOMP	SD090	0861_SD090_210414	14 Apr 2021	EB2111116	**45.6**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0008**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP	SD090	0861_SD090_211021	21 Oct 2021	EB2130850	**48.7**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0042	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0006
QLD_0861_PFASOMP	SD090	0861_SD090_220331	31 Mar 2022	EB2209950	**52.9**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025
QLD_0861_PFASOMP	SD090	0861_SD090_221021	21 Oct 2022	EB2231197	**62.8**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0015**	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD090	0861_QC111_230522	22 May 2023	EB2315514	**45.1**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0014	-	<0.0006	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD090	0861_QC211_230522	22 May 2023	RN1394931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFASOMP_23	SD090	0861_SD090_230522	22 May 2023	EB2315514	**52.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0040	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD090	0681_QC103_231023	23 Oct 2023	EB2333894-AA	**48.1**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD090	0861_QC203_231023	23 Oct 2023	RN1410504	-	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
QLD_0861_PFASOMP_23	SD090	0861_SD090_231023	23 Oct 2023	EB2333894-AA	**61.9**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0034	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_24	SD090	0861_SD090_240410	10 Apr 2024	EB2413910	**30.5**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFAS	SD091	0861_SD091_0.25_170914	14 Sep 2017	EB1719065	**29.1**	<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
QLD_0861_PFAS	SD091	0861_SD091_0_170914	14 Sep 2017	EB1719065	**36.3**	<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
QLD_0861_PFAS	SD091	0861_SD091_0.0_190510	10 May 2019	EB1911952	**16.4**	<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
QLD_0861_PFASOMP	SD091	0861_SD091_200420	20 Apr 2020	EB2011246-AC	**48.8**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0022	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD091	0861_SD091_201013	13 Oct 2020	EB2027172	**23.2**	<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
QLD_0861_PFASOMP	SD091	0861_SD091_210414	14 Apr 2021	EB2111116	**45.7**	<0.0005	<0.0005	<0.0005	<0.0005	**0.0016**	-	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012
QLD_0861_PFASOMP	SD091	0861_SD091_211021	21 Oct 2021	EB2130835	**39.2**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0016	-	<0.0004	<0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0012	<0.0002	<0.0002	<0.0006
QLD_0861_PFASOMP	SD091	0861_SD091_220331	31 Mar 2022	EB2209950	**29.4**	<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
QLD_0861_PFASOMP	SD091	0861_SD091_221021	21 Oct 2022	EB2231197	**49.4**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0010**	-	<0.0002	<0.001	<0.0002	<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
QLD_0861_PFASOMP_23	SD091	0861_SD091_230522	22 May 2023	EB2315514	**34.8**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0018	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005

TABLE A6: Sediment Analytical Summary

					Sampl	PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										
					Moisture Content	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)
					%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005
Project ID	**Location Code**	**Field ID**	**Date**	**Lab Report Number**																			
QLD_0861_PFASOMP_23	SD091	0681_QC102_231023	23 Oct 2023	EB2333894-AA	**35.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0004*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD091	0861_QC202_231023	23 Oct 2023	RN1410504	-	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
QLD_0861_PFASOMP_23	SD091	0861_SD091_231023	23 Oct 2023	EB2333894-AA	**27.0**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0006*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_24	SD091	0861_SD091_240410	10 Apr 2024	EB2413910	**31.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0006*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD094	0861_SD094_0.2_170915	15 Sep 2017	EB1719132	**31.6**	**0.0004**	**0.0004**	**0.0041**	**0.0009**	**0.0380**	-	**0.0053**	*<0.001*	*<0.0002*	**0.0011**	**0.0004**	**0.0006**	**0.0009**	*<0.0002*	**0.0014**	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD094	0861_SD094_0_170915	15 Sep 2017	EB1719132	**37.3**	**0.0004**	**0.0007**	**0.0115**	**0.0037**	**0.146**	-	**0.0021**	*<0.001*	*<0.0002*	**0.0023**	**0.0008**	**0.0022**	**0.0027**	**0.0010**	**0.0006**	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD094	0861_SD094_200415	15 Apr 2020	EB2010666-AE	**40.7**	*<0.0005*	*<0.0005*	**0.0011**	*<0.0005*	**0.0106**	-	*<0.0005*	*<0.001*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD094	0861_QC124_201014	14 Oct 2020	EB2027176-AA	**74.6**	*<0.0020*	*<0.0020*	*<0.0142*	*<0.0020*	*<0.0080*	-	*<0.0060*	*<0.010*	**0.0032**	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*
QLD_0861_PFASOMP	SD094	0861_QC224_201014	14 Oct 2020	RN1292029	-	*<0.001*	*<0.001*	*<0.001*	*<0.001*	**0.011**	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
QLD_0861_PFASOMP	SD094	0861_SD094_201014	14 Oct 2020	EB2027172	**75.5**	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0098*	-	*<0.0012*	*<0.006*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*
QLD_0861_PFASOMP	SD094	0861_SD094_210414	14 Apr 2021	EB2111116	**27.4**	*<0.0002*	*<0.0002*	**0.0004**	*<0.0002*	**0.0061**	-	*<0.0002*	*<0.001*	**0.0002**	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD094	0861_SD094_211022	22 Oct 2021	EB2130835	**33.6**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0036**	-	*<0.0002*	*<0.001*	**0.0004**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0006*
QLD_0861_PFASOMP	SD094	0861_QC177_220401	01 Apr 2022	EB2209942	**31.1**	*<0.0002*	*<0.0002*	**0.0006**	*<0.0002*	**0.0103**	-	*<0.0002*	*<0.001*	**0.0008**	**0.0007**	**0.0004**	**0.0004**	**0.0002**	*<0.0003*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD094	0861_QC277_220401	01 Apr 2022	RN1349008	-	*<0.001*	*<0.001*	*<0.001*	*<0.001*	**0.017**	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.002*	*<0.002*	*<0.002*
QLD_0861_PFASOMP	SD094	0861_SD094_220401	01 Apr 2022	EB2209950	**29.3**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0082**	-	*<0.0002*	*<0.001*	**0.0008**	**0.0005**	**0.0003**	**0.0003**	**0.0002**	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD094	0861_SD094_221019	19 Oct 2022	EB2231197	**30.4**	*<0.0002*	*<0.0002*	*<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*	*<0.0005*
QLD_0861_PFASOMP_23	SD094	0861_SD094_230522	22 May 2023	EB2315514	**43.0**	*<0.0002*	*<0.0002*	**0.0002**	*<0.0002*	*<0.0048*	-	*<0.0016*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD094	0861_SD094_231024	24 Oct 2023	EB2333894-AA	**62.1**	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	-	*<0.0020*	*<0.010*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*
QLD_0861_PFASOMP_24	SD094	0861_SD094_240411	11 Apr 2024	EB2413910	**30.2**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0063**	-	*<0.0002*	*<0.001*	**0.0002**	**0.0003**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD098	0861_SD098_0_170915	15 Sep 2017	EB1719132	**31.3**	*<0.0002*	*<0.0002*	**0.0009**	*<0.0002*	**0.0022**	-	*<0.0002*	*<0.001*	*<0.0002*	**0.0005**	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD098	0861_SD098_0.0_190506	06 May 2019	EB1911952	**26.3**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0007**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD098	0861_SD098_0.0_191120	20 Nov 2019	EB1931427	**20.8**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0005**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD098	0861_SD098_200415	15 Apr 2020	EB2010666-AF	**42.5**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0026**	-	*<0.0005*	*<0.001*	*<0.0005*	*<0.0005*	**0.0013**	*<0.0005*	*<0.0005*	*<0.0008*	*<0.0005*	*<0.0014*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD098	0861_SD098_201015	15 Oct 2020	EB2027208-AA	**38.2**	*<0.0002*	*<0.0002*	**0.0008**	*<0.0002*	**0.0160**	-	*<0.0002*	*<0.001*	**0.0008**	**0.0007**	**0.0003**	**0.0004**	**0.0002**	**0.0004**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD098	0861_SD098_210415	15 Apr 2021	EB2111112	**35.6**	*<0.0002*	*<0.0002*	**0.0004**	*<0.0002*	**0.0075**	-	*<0.0010*	*<0.001*	**0.0006**	**0.0005**	**0.0003**	*<0.0004*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0004*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD098	0861_SD098_211019	19 Oct 2021	EB2130815	**31.6**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0020**	-	*<0.0002*	*<0.001*	**0.0003**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD098	0861_SD098_220401	01 Apr 2022	EB2209946	**35.5**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0035*	-	*<0.0002*	*<0.001*	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD098	0861_SD098_221020	20 Oct 2022	EB2231202	**32.0**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0022**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD098	0861_QC108_230418	18 Apr 2023	EB2312062-AB	**23.7**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0007**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD098	0861_QC208_230418	18 Apr 2023	EB2312062-AB	**22.1**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0006**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD098	0861_SD098_230418	18 Apr 2023	EB2312057	**25.8**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0010**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD098	0861_SD098_231026	26 Oct 2023	EB2333898	**18.2**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0012**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_24	SD098	0861_SD098_240412	12 Apr 2024	EB2413946	**33.7**	*<0.0002*	*<0.0002*	**0.0002**	*<0.0002*	**0.0036**	-	*<0.0002*	*<0.001*	**0.0002**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0004*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD099	0861_SD0099_0.4_170915	15 Sep 2017	EB1719132	**31.8**	*<0.0002*	*<0.0002*	**0.0005**	**0.0006**	**0.0269**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD099	0861_SD0099_0_170915	15 Sep 2017	EB1719132	**52.5**	**0.0002**	*<0.0002*	**0.0043**	**0.0017**	**0.111**	-	**0.0033**	*<0.001*	*<0.0002*	**0.0006**	*<0.0002*	**0.0007**	**0.0003**	*<0.0002*	**0.0009**	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD099	0861_SD099_0.0_190507	07 May 2019	EB1911952	**47.0**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0064**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD099	0861_SD099_191127	27 Nov 2019	EB1932183	**41.3**	*<0.0002*	**0.0002**	**0.0045**	**0.0013**	**0.0458**	-	**0.0008**	*<0.001*	*<0.0002*	**0.0002**	*<0.0002*	**0.0005**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD099	0861_SD099_200421	21 Apr 2020	EB2011246-AC	**47.6**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0053**	-	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD099	0861_SD099_201015	15 Oct 2020	EB2027172	**39.9**	**0.0010**	**0.0009**	**0.0033**	*<0.0005*	**0.0077**	-	*<0.0005*	*<0.002*	**0.0007**	**0.0007**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD099	0861_SD099_210413	13 Apr 2021	EB2111116	**49.2**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0077**	-	**0.0067**	*<0.002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD099	0861_SD099_211020	20 Oct 2021	EB2130835	**42.4**	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	**0.0083**	-	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD099	0861_SD099_220329	29 Mar 2022	EB2209951	**49.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0034*	-	*<0.0029*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD099	0861_SD099_221020	20 Oct 2022	EB2231197	**27.9**	*<0.0002*	*<0.0002*	**0.0014**	*<0.0002*	**0.0042**	-	**0.0012**	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD099	0861_SD099_230419	19 Apr 2023	EB2312062-AA	**37.6**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0044**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0004*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0006*
QLD_0861_PFASOMP_23	SD099	0861_SD099_231024	24 Oct 2023	EB2333894-AA	**49.8**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0031**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_24	SD099	0861_SD099_240411	11 Apr 2024	EB2413910	**40.2**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0035*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD100	0861_SD100_0.2_170918	18 Sep 2017	EB1719278	**35.4**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0110**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD100	0861_SD100_0_170918	18 Sep 2017	EB1719278	**39.0**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0021**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD100	0861_QC103_190507	07 May 2019	EB1911952	**34.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0012**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD100	0861_SD100_0.0_190507	07 May 2019	EB1911952	**38.9**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0009**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD100	0861_QC204_191127	27 Nov 2019	232094-A	**42**	*<0.0001*	*<0.0001*	**0.0003**	*<0.0001*	**0.016**	-	**0.002**	*<0.0002*	*<0.0002*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.005*
QLD_0861_PFAS	SD100	0861_SD100_0.1_191127	27 Nov 2019	EB1932183	**48.3**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0121**	-	**0.0006**	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFAS	SD100	QC104_191127	27 Nov 2019	EB1934177	**36.6**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0048**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD100	0861_SD100_200421	21 Apr 2020	EB2011246-AC	**56.9**	*<0.001*	*<0.001*	*<0.001*	*<0.001*	**0.003**	-	*<0.001*	*<0.005*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.0014*	*<0.001*	*<0.001*	*<0.0025*
QLD_0861_PFASOMP	SD100	0861_SD100_201015	15 Oct 2020	EB2027172	**10.2**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0024**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD100	0861_SD100_210413	13 Apr 2021	EB2111116	**42.1**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0042**	-	*<0.0006*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD100	0861_SD100_211020	20 Oct 2021	EB2130835	**37.2**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0028**	-	*<0.0005*	*<0.002*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*
QLD_0861_PFASOMP	SD100	0861_SD100_220329	29 Mar 2022	EB2209951	**34.7**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	**0.0030**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP	SD100	0861_SD100_221020	20 Oct 2022	EB2231197	**54.5**	*<0.0002*	*<0.0002*	**0.0003**	*<0.0002*	**0.0058**	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*
QLD_0861_PFASOMP_23	SD100	0861_SD100_230419	19 Apr 2023	EB2312062-AA	**80.1**	*<0.0002*	*<0.0002*	**0.0014**	*<0.0012*	*<0.0177*	-	*<0.0012*	*<0.001*	**0.0002**	**0.0003**	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*
QLD_0861_PFASOMP_23	SD100	0861_SD100_231024	24 Oct 2023	EB2333894-AA	**73.0**	*<0.0020*	*<0.0020*	*<0.0023*	*<0.0020*	*<0.0020*	-	*<0.0020*	*<0.010*	*<0.0020*	*<0.0024*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*
QLD_0861_PFASOMP_24	SD100	0861_SD100_240411	11 Apr 2024	EB2413910	**35.4**	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0031*	-	*<0.0002*	*<0.001*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0005*

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorooctadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFAS	SD002	0861_SD002_0.4_170913	13 Sep 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0015**	-	**0.0015**	-	-	**0.0015**
QLD_0861_PFAS	SD002	0861_SD002_0_170913	13 Sep 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0180**	-	**0.0183**	-	-	**0.0191**
QLD_0861_PFAS	SD002	0861_SD002_0.0_190429	29 Apr 2019	<0.0005	**0.0353**	**0.0030**	**0.0006**	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0095**	-	**0.0653**	-	-	**0.0672**
QLD_0861_PFASOMP	SD002	0861_SD002_200415	15 Apr 2020	<0.0005	**0.0022**	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0087**	-	**0.0137**	-	-	**0.0137**
QLD_0861_PFASOMP	SD002	0861_SD002_201016	16 Oct 2020	<0.0005	**0.0084**	**0.0008**	**0.0014**	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0163**	-	**0.0346**	-	-	**0.0450**
QLD_0861_PFASOMP	SD002	0861_SD002_210330	30 Mar 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0086**	-	**0.0112**	-	-	**0.0123**
QLD_0861_PFASOMP	SD002	0861_SD002_211025	25 Oct 2021	<0.0005	**0.0006**	<0.0005	<0.0005	<0.0002	<0.0006	<0.0002	<0.0006	<0.0006	<0.0002	<0.0006	-	**0.0434**	-	**0.0512**	-	-	**0.0609**
QLD_0861_PFASOMP	SD002	0861_QC167_220328	28 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0135**	-	**0.0148**	-	-	**0.0153**
QLD_0861_PFASOMP	SD002	0861_QC267_220328	28 Mar 2022	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP	SD002	0861_SD002_220328	28 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFASOMP	SD002	0861_SD002_221021	21 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0148**	-	**0.0156**	-	-	**0.0184**
QLD_0861_PFASOMP_23	SD002	0861_SD002_230418	18 Apr 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0006	<0.0002	<0.0005	<0.0006	<0.0002	<0.0005	-	**0.0139**	-	**0.0147**	-	-	**0.0176**
QLD_0861_PFASOMP_23	SD002	0861_SD002_231027	27 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0041**	-	**0.0045**	-	-	**0.0045**
QLD_0861_PFASOMP_24	SD002	0861_SD002_240410	10 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0098**	-	**0.0113**	-	-	**0.0117**
QLD_0861_PFAS	SD003	0861_SD003_0.1_170913	13 Sep 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0435**	-	**0.0469**	-	-	**0.0482**
QLD_0861_PFAS	SD003	0861_SD003_0_170913	13 Sep 2017	<0.0005	<0.0005	**0.0005**	**0.0006**	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0199**	-	**0.0243**	-	-	**0.0288**
QLD_0861_PFAS	SD003	0861_SD003_0.0_190429	29 Apr 2019	<0.0005	**0.0008**	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0817**	-	**0.0873**	-	-	**0.0937**
QLD_0861_PFASOMP	SD003	0861_SD003_200415	15 Apr 2020	<0.0005	**0.0007**	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0150	<0.0005	<0.0012	-	**0.0334**	-	**0.0401**	-	-	**0.0415**
QLD_0861_PFASOMP	SD003	0861_SD003_201016	16 Oct 2020	<0.0005	**0.0010**	<0.0005	**0.0005**	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0364**	-	**0.0500**	-	-	**0.0556**
QLD_0861_PFASOMP	SD003	0861_SD003_210330	30 Mar 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013	<0.0005	<0.0013	<0.0013	<0.0005	<0.0013	-	**0.0115**	-	**0.0132**	-	-	**0.0132**
QLD_0861_PFASOMP	SD003	0861_SD003_211022	22 Oct 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0297**	-	**0.0327**	-	-	**0.0371**
QLD_0861_PFASOMP	SD003	0861_SD003_220328	28 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFASOMP	SD003	0861_SD003_221021	21 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0314**	-	**0.0397**	-	-	**0.0414**
QLD_0861_PFASOMP_23	SD003	0861_SD003_230418	18 Apr 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0295**	-	**0.0304**	-	-	**0.0323**
QLD_0861_PFASOMP_23	SD003	0861_SD003_231027	27 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFASOMP_24	SD003	0861_SD003_240410	10 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0013**	-	**0.0013**	-	-	**0.0013**
QLD_0861_PFAS	SD004	0861_SD04_0.3_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0034**	-	**0.0034**	-	-	**0.0034**
QLD_0861_PFAS	SD004	0861_SD04_0_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0048**	-	**0.0048**	-	-	**0.0048**
QLD_0861_PFAS	SD004	0861_SD004_0.0_190502	02 May 2019	<0.0005	<0.0005	<0.0005	<0.0005	**0.0002**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0174**	-	**0.0174**	-	-	**0.0176**
QLD_0861_PFAS	SD004	0861_SD004_0.0_191119	19 Nov 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0032**	-	**0.0032**	-	-	**0.0032**
QLD_0861_PFASOMP	SD004	0861_SD004_200414	14 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0028**	-	**0.0028**	-	-	**0.0028**
QLD_0861_PFASOMP	SD004	0861_SD004_201012	12 Oct 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0058**	-	**0.0058**	-	-	**0.0058**
QLD_0861_PFASOMP	SD004	0861_SD004_210414	14 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0062**	-	**0.0062**	-	-	**0.0062**
QLD_0861_PFASOMP	SD004	0861_SD004_211019	19 Oct 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0051**	-	**0.0064**	-	-	**0.0069**
QLD_0861_PFASOMP	SD004	0861_SD004_220329	29 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0013**	-	**0.0013**	-	-	**0.0013**
QLD_0861_PFASOMP	SD004	0861_SD004_221018	18 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP_23	SD004	0861_SD004_230428	28 Apr 2023	<0.0005	<0.0005	<0.0005	<0.0005	**0.0005**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0084**	-	**0.0084**	-	-	**0.0089**
QLD_0861_PFASOMP_23	SD004	0861_SD004_231025	25 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0057**	-	**0.0057**	-	-	**0.0057**
QLD_0861_PFASOMP_24	SD004	0861_SD004_240409	09 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0289**	-	**0.0305**	-	-	**0.0305**
QLD_0861_PFAS	SD005	0861_SD05_0.3_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	**0.0019**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.543**	-	**0.548**	-	-	**0.556**
QLD_0861_PFAS	SD005	0861_SD05_0_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	**0.0064**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.485**	-	**0.488**	-	-	**0.506**
QLD_0861_PFAS	SD005	0861_SD005_0.0_190430	30 Apr 2019	<0.0005	**0.0016**	<0.0005	<0.0005	**0.0069**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.137**	-	**0.144**	-	-	**0.152**
QLD_0861_PFAS	SD005	0861_SD005_0.3_190430	30 Apr 2019	<0.0005	<0.0005	<0.0005	<0.0005	**0.0492**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.168**	-	**0.174**	-	-	**0.224**
QLD_0861_PFAS	SD005	0861_SD005_0.0_191118	18 Nov 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0079**	-	**0.0081**	-	-	**0.0089**
QLD_0861_PFAS	SD005	0861_SD005_0.3_191119	19 Nov 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0069**	-	**0.0071**	-	-	**0.0071**
QLD_0861_PFASOMP	SD005	0861_SD005_200414	14 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0031**	-	**0.0031**	-	-	**0.0031**
QLD_0861_PFASOMP	SD005	0861_SD005_201012	12 Oct 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0398**	-	**0.0410**	-	-	**0.0410**
QLD_0861_PFASOMP	SD005	0861_SD005_210412	12 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0030	<0.0005	<0.0013	<0.0005	<0.0013	<0.0013	<0.0005	<0.0013	-	**0.0215**	-	**0.0215**	-	-	**0.0215**
QLD_0861_PFASOMP	SD005	0861_SD005_211019	19 Oct 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0104**	-	**0.0104**	-	-	**0.0104**
QLD_0861_PFASOMP	SD005	0861_SD005_220329	29 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0025**	-	**0.0025**	-	-	**0.0030**
QLD_0861_PFASOMP	SD005	0861_QC183_221018	18 Oct 2022	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0026	<0.0010	<0.0026	<0.0026	<0.0010	<0.0026	-	**0.134**	-	**0.134**	-	-	**0.134**
QLD_0861_PFASOMP	SD005	0861_QC283_221018	18 Oct 2022	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP	SD005	0861_SD005_221018	18 Oct 2022	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0025	<0.0025	<0.0010	<0.0025	-	**0.118**	-	**0.118**	-	-	**0.118**
QLD_0861_PFASOMP_23	SD005	0861_SD005_230428	28 Apr 2023	<0.0010	<0.0010	<0.0010	<0.0010	**0.0238**	<0.0024	<0.0010	<0.0024	<0.0024	<0.0010	<0.0024	-	**0.353**	-	**0.357**	-	-	**0.381**
QLD_0861_PFASOMP_23	SD005	0861_SD005_231025	25 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0030**	-	**0.0030**	-	-	**0.0033**
QLD_0861_PFASOMP_24	SD005	0861_SD005_240409	09 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0031**	-	**0.0033**	-	-	**0.0033**
QLD_Hist_202012-3	SD008	RAAFAmb SED04 0.0-0.1	26 Jul 2012	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	RAAFAmb SED04 0.4-0.5	26 Jul 2012	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0.0_121009	09 Oct 2012	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0.4_121009	09 Oct 2012	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0.4_130116	16 Jan 2013	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	5259_SD04_0_130116	16 Jan 2013	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	E0861_SD04_0.4_130809	09 Aug 2013	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	E0861_SD04_0_130809	09 Aug 2013	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD008	0861_SED02_170302	02 Mar 2017	<0.0005	<0.0005	<0.0005	**0.0008**	**0.0012**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.127**	-	**0.136**	-	-	**0.148**
QLD_0861_PFAS	SD008	0861_SD08_0.3_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	**0.0005**	<0.0005	<0.0002	<0.0005	<0.0005	**0.0007**	<0.0005	-	**0.0234**	-	**0.0241**	-	-	**0.0265**
QLD_0861_PFAS	SD008	0861_SD08_0_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	**0.0004**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0276**	-	**0.0284**	-	-	**0.0294**
QLD_Hist_202012-3	SD008	0861_SED02_171013	13 Oct 2017	<0.0005	<0.0005	<0.0005	<0.0005	**0.0007**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0525**	-	**0.0537**	-	-	**0.0565**
QLD_0861_PFAS	SD008	0861_SD008_0.0_190502	02 May 2019	<0.0010	<0.0010	<0.0010	<0.0010	**0.0150**	<0.0025	<0.0010	<0.0025	<0.0025	<0.0010	<0.0025	-	**0.0373**	-	**0.0373**	-	-	**0.0669**
QLD_0861_PFASOMP	SD008	0861_QC107_200417	17 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0048**	-	**0.0050**	-	-	**0.0050**
QLD_0861_PFASOMP	SD008	0861_QC207_200417	17 Apr 2020	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP	SD008	0861_QC207_200417	17 Apr 2020	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP	SD008	0861_SD008_200417	17 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0308**	-	**0.0322**	-	-	**0.0330**
QLD_0861_PFASOMP	SD008	0861_SD008_201012	12 Oct 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0504**	-	**0.0512**	-	-	**0.0512**
QLD_0861_PFASOMP	SD008	0861_SD008_210415	15 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0005	**0.0008**	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.156**	-	**0.158**	-	-	**0.168**
QLD_0861_PFASOMP	SD008	0861_SD008_211026	26 Oct 2021	<0.0005	<0.0005	<0.0005	<0.0005	**0.0003**	<0.0006	<0.0002	<0.0006	<0.0006	<0.0002	<0.0006	-	**0.109**	-	**0.110**	-	-	**0.117**
QLD_0861_PFASOMP	SD008	0861_SD008_220328	28 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0004**	-	**0.0004**	-	-	**0.0004**
QLD_0861_PFASOMP	SD008	0861_SD008_221026	26 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0241**	-	**0.0241**	-	-	**0.0253**
QLD_0861_PFASOMP_23	SD008	0861_SD008_230428	28 Apr 2023	<0.0005	**0.0006**	**0.0013**	<0.0005	**0.0029**	<0.0006	<0.0002	<0.0006	<0.0006	<0.0002	<0.0006	-	**0.262**	-	**0.272**	-	-	**0.282**
QLD_0861_PFASOMP_23	SD008	0861_SD008_231025	25 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	**0.0009**	<0.0005	<0.0002	<0.0005	<0.0005	**0.0003**	<0.0005	-	**0.0359**	-	**0.0364**	-	-	**0.0398**
QLD_0861_PFASOMP_24	SD008	0861_SD008_240412	12 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	**0.0009**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0300**	-	**0.0309**	-	-	**0.0390**
QLD_0861_PFAS	SD009	0861_SD09_0.3_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFAS	SD009	0861_SD09_0_170531	31 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFAS	SD009	0861_SD009_0.0_190502	02 May 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0028**	-	**0.0028**	-	-	**0.0028**
QLD_0861_PFASOMP	SD009	0861_SD009_200415	15 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFASOMP	SD009	0861_SD009_201012	12 Oct 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0052**	-	**0.0052**	-	-	**0.0052**

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP	SD009	0861_SD009_210414	14 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0033**	-	**0.0035**	-	-	**0.0035**
QLD_0861_PFASOMP	SD009	0861_SD009_211022	22 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0100**	-	**0.0107**	-	-	**0.0107**
QLD_0861_PFASOMP	SD009	0861_SD009_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0602**	-	**0.0625**	-	-	**0.0647**
QLD_0861_PFASOMP_23	SD009	0861_SD009_230428	28 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0007**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0725**	-	**0.0731**	-	-	**0.0738**
QLD_0861_PFASOMP_23	SD009	0861_SD009_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0021**	-	**0.0021**	-	-	**0.0021**
QLD_0861_PFASOMP_24	SD009	0861_SD009_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0064**	-	**0.0064**	-	-	**0.0064**
QLD_Hist_202012-3	SD011	E0861_SD09_0.4_130822	22 Aug 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD011	E0861_SD09_0_130822	22 Aug 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_0861_PFAS	SD011	0861_SD011_SD_0.3_170912	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0197**	-	**0.0205**	-	-	**0.0205**
QLD_0861_PFAS	SD011	0861_SD011_SD_0_170912	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0178**	-	**0.0188**	-	-	**0.0188**
QLD_0861_PFAS	SD011	0861_SD011_0.0_190501	01 May 2019	*<0.0005*	**0.0125**	**0.0010**	*<0.0005*	**0.0012**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.394**	-	**0.423**	-	-	**0.434**
QLD_0861_PFASOMP	SD011	0861_SD011_200414	14 Apr 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0595**	-	**0.0595**	-	-	**0.0595**
QLD_0861_PFASOMP	SD011	0861_SD011_201016	16 Oct 2020	*<0.0005*	**0.0148**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.151**	-	**0.273**	-	-	**0.284**
QLD_0861_PFASOMP	SD011	0861_SD011_210330	30 Mar 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.782**	-	**0.797**	-	-	**0.813**
QLD_0861_PFASOMP	SD011	0861_SD011_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0806**	-	**0.116**	-	-	**0.124**
QLD_0861_PFASOMP	SD011	0861_SD011_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0009**	-	**0.0009**	-	-	**0.0009**
QLD_0861_PFASOMP_23	SD011	0861_SD011_230417	17 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0040**	-	**0.0042**	-	-	**0.0042**
QLD_0861_PFASOMP_23	SD011	0861_SD011_231024	24 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0010*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.105**	-	**0.107**	-	-	**0.107**
QLD_0861_PFASOMP_24	SD011	0861_SD011_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0407**	-	**0.0420**	-	-	**0.0426**
QLD_Hist_202012-3	SD015	RAAF AMB SED106 0.0-0.1	01 Aug 2012	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	RAAF AMB SED106 0.4-0.5	01 Aug 2012	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0.0_121011	11 Oct 2012	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0.4_121011	11 Oct 2012	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_QC1_SD_130117	17 Jan 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0.4_130117	17 Jan 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	5259_SD106_0_130117	17 Jan 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	QC2	17 Jan 2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	E0861_SD106_0.4_130821	21 Aug 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	E0861_SD106_0_130821	21 Aug 2013	-	*<0.005*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QLD_Hist_202012-3	SD015	0861_SED10_170302	02 Mar 2017	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.0025*	*<0.001*	*<0.0025*	*<0.0025*	*<0.001*	*<0.0025*	-	**0.0114**	-	**0.0125**	-	-	**0.0125**
QLD_0861_PFAS	SD015	0861_SD15_0.3_170605	05 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0049**	-	**0.0049**	-	-	**0.0051**
QLD_0861_PFAS	SD015	0861_SD15_0_170605	05 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0023**	-	**0.0023**	-	-	**0.0027**
QLD_Hist_202012-3	SD015	0861_SED10_171016	16 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0104**	-	**0.0106**	-	-	**0.0106**
QLD_0861_PFAS	SD015	0861_SD015_0.0_190430	30 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0177**	-	**0.0177**	-	-	**0.0177**
QLD_0861_PFAS	SD015	0861_SD015_0.0_191119	19 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0026**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0153**	-	**0.0153**	-	-	**0.0195**
QLD_0861_PFASOMP	SD015	0861_SD015_200414	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0013**	-	**0.0013**	-	-	**0.0019**
QLD_0861_PFASOMP	SD015	0861_SD015_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0010**	-	**0.0010**	-	-	**0.0010**
QLD_0861_PFASOMP	SD015	0861_SD015_210412	12 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0060**	-	**0.0060**	-	-	**0.0060**
QLD_0861_PFASOMP	SD015	0861_SD015_211019	19 Oct 2021	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*	*<0.0012*	*<0.0031*	*<0.0031*	*<0.0012*	*<0.0031*	-	*<0.0012*	-	*<0.0012*	-	-	*<0.0012*
QLD_0861_PFASOMP	SD015	0861_SD015_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0004*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0040**	-	**0.0048**	-	-	**0.0048**
QLD_0861_PFASOMP	SD015	0861_SD015_221018	18 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0044**	-	**0.0044**	-	-	**0.0050**
QLD_0861_PFASOMP_23	SD015	0861_SD015_230426	26 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0062**	-	**0.0062**	-	-	**0.0062**
QLD_0861_PFASOMP_23	SD015	0861_SD015_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0073**	-	**0.0076**	-	-	**0.0076**
QLD_0861_PFASOMP_24	SD015	0861_SD015_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0062**	-	**0.0062**	-	-	**0.0062**
QLD_0861_PFAS	SD016	0861_SD16_0.3_170605	05 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0006**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.247**	-	**0.253**	-	-	**0.257**
QLD_0861_PFAS	SD016	0861_SD16_0_170605	05 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0014**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.588**	-	**0.599**	-	-	**0.612**
QLD_0861_PFAS	SD016	0861_SD016_0.0_190430	30 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0098**	-	**0.0102**	-	-	**0.0108**
QLD_0861_PFAS	SD016	0861_SD016_0.0_191119	19 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0031**	-	**0.0031**	-	-	**0.0031**
QLD_0861_PFASOMP	SD016	0861_SD016_200414	14 Apr 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0040**	-	**0.0065**	-	-	**0.0065**
QLD_0861_PFASOMP	SD016	0861_SD016_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD016	0861_SD016_210412	12 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0046**	-	**0.0046**	-	-	**0.0046**
QLD_0861_PFASOMP	SD016	0861_SD016_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0128**	-	**0.0136**	-	-	**0.0136**
QLD_0861_PFASOMP	SD016	0861_SD016_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0020*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0114**	-	**0.0164**	-	-	**0.0170**
QLD_0861_PFASOMP	SD016	0861_SD016_221018	18 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0061**	-	**0.0061**	-	-	**0.0061**
QLD_0861_PFASOMP_23	SD016	0861_SD016_230428	28 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0045**	-	**0.0045**	-	-	**0.0045**
QLD_0861_PFASOMP_23	SD016	0861_SD016_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0035**	-	**0.0035**	-	-	**0.0035**
QLD_0861_PFASOMP_24	SD016	0861_SD016_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD018	0861_SD18_0.3_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0030**	-	**0.0030**	-	-	**0.0030**
QLD_0861_PFAS	SD018	0861_SD18_0_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0059**	-	**0.0059**	-	-	**0.0062**
QLD_0861_PFAS	SD018	0861_SD018_0.0_190430	30 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0208**	-	**0.0211**	-	-	**0.0214**
QLD_0861_PFAS	SD018	0861_SD018_191119	19 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0035**	-	**0.0035**	-	-	**0.0035**
QLD_0861_PFASOMP	SD018	0861_SD018_200414	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0007**	-	**0.0007**	-	-	**0.0007**
QLD_0861_PFASOMP	SD018	0861_SD018_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0027**	-	**0.0050**	-	-	**0.0050**
QLD_0861_PFASOMP	SD018	0861_SD018_210412	12 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	**0.0104**	-	**0.0104**	-	-	**0.0391**
QLD_0861_PFASOMP	SD018	0861_SD018_211019	19 Oct 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0064**	-	**0.0064**	-	-	**0.0064**
QLD_0861_PFASOMP	SD018	0861_SD018_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0280**	-	**0.0280**	-	-	**0.0283**
QLD_0861_PFASOMP	SD018	0861_SD018_221018	18 Oct 2022	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP_23	SD018	0861_SD018_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0058**	-	**0.0058**	-	-	**0.0058**
QLD_0861_PFASOMP_24	SD018	0861_SD018_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0036**	-	**0.0036**	-	-	**0.0036**
QLD_0861_PFAS	SD020	0861_SD20_0.2_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0095**	-	**0.0098**	-	-	**0.0106**
QLD_0861_PFAS	SD020	0861_SD20_0_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0053**	-	**0.0053**	-	-	**0.0055**
QLD_0861_PFAS	SD020	0861_SD020_0.0_190430	30 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0032**	-	**0.0032**	-	-	**0.0032**
QLD_0861_PFAS	SD020	0861_SD020_191119	19 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0021**	-	**0.0021**	-	-	**0.0021**
QLD_0861_PFASOMP	SD020	0861_SD020_200415	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0012**	-	**0.0012**	-	-	**0.0012**
QLD_0861_PFASOMP	SD020	0861_QC120_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0033**	-	**0.0033**	-	-	**0.0033**
QLD_0861_PFASOMP	SD020	0861_QC220_201012	12 Oct 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD020	0861_SD020_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0015**	-	**0.0015**	-	-	**0.0015**
QLD_0861_PFASOMP	SD020	0861_SD020_210412	12 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0093**	-	**0.0101**	-	-	**0.0114**
QLD_0861_PFASOMP	SD020	0861_SD020_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0042**	-	**0.0045**	-	-	**0.0052**
QLD_0861_PFASOMP	SD020	0861_SD020_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0037**	-	**0.0037**	-	-	**0.0046**
QLD_0861_PFASOMP	SD020	0861_QC284_221018	18 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0200**	-	**0.0212**	-	-	**0.0229**
QLD_0861_PFASOMP	SD020	0861_SD020_221018	18 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0133**	-	**0.0142**	-	-	**0.0153**
QLD_0861_PFASOMP	SD020	0861_QC184_221019	19 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0176**	-	**0.0187**	-	-	**0.0200**
QLD_0861_PFASOMP_23	SD020	0861_SD020_230428	28 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFASOMP_23	SD020	0861_SD020_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0064**	-	**0.0064**	-	-	**0.0064**

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfuolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP_24	SD020	0861_QC101_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0012*	*<0.0002*	*<0.0012*	*<0.0012*	*<0.0002*	*<0.0012*	-	**0.0034**	-	**0.0034**	-	-	**0.0034**
QLD_0861_PFASOMP_24	SD020	0861_QC201_240409	09 Apr 2024	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_24	SD020	0861_SD020_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0043**	-	**0.0043**	-	-	**0.0043**
QLD_0861_PFAS	SD021	0861_SD021_0.3_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0006**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.169**	-	**0.173**	-	-	**0.177**
QLD_0861_PFAS	SD021	0861_SD021_0_170914	14 Sep 2017	*<0.0005*	*<0.0005*	**0.0025**	*<0.0005*	**0.0514**	**0.0015**	**0.0009**	*<0.0005*	*<0.0005*	**0.0016**	*<0.0005*	-	**0.717**	-	**0.741**	-	-	**0.882**
QLD_0861_PFAS	SD021	0861_SD021_0.0_190503	03 May 2019	*<0.0005*	**0.0008**	*<0.0005*	*<0.0005*	**0.0013**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.271**	-	**0.276**	-	-	**0.286**
QLD_0861_PFASOMP	SD021	0861_SD021_200420	20 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.001*	**0.0148**	*<0.0025*	*<0.001*	*<0.0025*	*<0.0025*	*<0.001*	*<0.0025*	-	**0.701**	-	**0.721**	-	-	**0.765**
QLD_0861_PFASOMP	SD021	0861_SD021_201014	14 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0042**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.316**	-	**0.411**	-	-	**0.446**
QLD_0861_PFASOMP	SD021	0861_SD021_210330	30 Mar 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0222**	-	**0.0293**	-	-	**0.0327**
QLD_0861_PFASOMP	SD021	0861_QC158_211021	21 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0012**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0413**	-	**0.0449**	-	-	**0.0521**
QLD_0861_PFASOMP	SD021	0861_QC258_211021	21 Oct 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD021	0861_SD021_211021	21 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0008**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0302**	-	**0.0325**	-	-	**0.0382**
QLD_0861_PFASOMP	SD021	0861_SD021_220331	31 Mar 2022	*<0.0244*	*<0.0244*	*<0.0244*	*<0.0244*	*<0.0244*	*<0.0611*	*<0.0244*	*<0.0611*	*<0.0611*	*<0.0244*	*<0.0611*	-	**0.130**	-	**0.130**	-	-	**0.130**
QLD_0861_PFASOMP	SD021	0861_SD021_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0034**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.124**	-	**0.133**	-	-	**0.154**
QLD_0861_PFASOMP_23	SD021	0861_SD021_230426	26 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0511**	-	**0.0557**	-	-	**0.0615**
QLD_0861_PFASOMP_23	SD021	0861_SD021_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0015*	*<0.0005*	**0.0136**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.387**	-	**0.441**	-	-	**0.506**
QLD_0861_PFASOMP_24	SD021	0861_SD021_240410	10 Apr 2024	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	**0.0040**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.317**	-	**0.321**	-	-	**0.340**
QLD_0861_PFAS	SD025	0861_SD25_0_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD025	0861_SD025_0.0_190507	07 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	**0.0005**	-	-	**0.0005**
QLD_0861_PFAS	SD025	0861_QC102_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD025	0861_QC202_191120	20 Nov 2019	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.001*	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	*<0.0001*	-	-	-	-	*<0.0001*
QLD_0861_PFAS	SD025	0861_SD025_0.0_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_QC103_200415	15 Apr 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0024*	*<0.0010*	*<0.0024*	*<0.0024*	*<0.0010*	*<0.0024*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP	SD025	0861_QC203_200415	15 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD025	0861_QC203_200415	15 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD025	0861_SD025_200415	15 Apr 2020	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.0020*	*<0.0050*	-	*<0.0020*	-	*<0.0020*	-	-	*<0.0020*
QLD_0861_PFASOMP	SD025	0861_QC125_201014	14 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_QC225_201014	14 Oct 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD025	0861_SD025_201014	14 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_QC150_210421	21 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_QC250_210421	21 Apr 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD025	0861_SD025_210421	21 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_SD025_211022	22 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_QC170_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_QC270_220328	28 Mar 2022	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD025	0861_SD025_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD025	0861_SD025_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD025	0861_QC109_230426	26 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0003**	-	**0.0003**	-	-	**0.0003**
QLD_0861_PFASOMP_23	SD025	0861_QC209_230426	26 Apr 2023	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_23	SD025	0861_SD025_230426	26 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0005**	-	**0.0005**	-	-	**0.0005**
QLD_0861_PFASOMP_23	SD025	0861_SD025_231026	26 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD025	0861_QC105_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD025	0861_QC205_240412	12 Apr 2024	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_24	SD025	0861_SD025_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD026	0861_SD26_0.3_170602	02 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0359**	-	**0.0369**	-	-	**0.0375**
QLD_0861_PFAS	SD026	0861_SD26_0_170602	02 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0345**	-	**0.0349**	-	-	**0.0349**
QLD_0861_PFAS	SD026	0861_SD026_190507	07 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0092**	-	**0.0095**	-	-	**0.0095**
QLD_0861_PFAS	SD026	0861_QC102_191127	27 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0332**	-	**0.0359**	-	-	**0.0372**
QLD_0861_PFAS	SD026	0861_QC202_191127	27 Nov 2019	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.002*	*<0.002*	*<0.0004*	*<0.002*	*<0.002*	*<0.0004*	*<0.01*	-	**0.01**	-	-	-	-	**0.012**
QLD_0861_PFAS	SD026	0861_SD026_191127	27 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0283**	-	**0.0306**	-	-	**0.0316**
QLD_0861_PFASOMP	SD026	0861_SD026_200421	21 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0029**	-	**0.0029**	-	-	**0.0029**
QLD_0861_PFASOMP	SD026	0861_SD026_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0093**	-	**0.0093**	-	-	**0.0093**
QLD_0861_PFASOMP	SD026	0861_SD026_210416	16 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0092**	-	**0.0092**	-	-	**0.0092**
QLD_0861_PFASOMP	SD026	0861_SD026_211020	20 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0062**	-	**0.0067**	-	-	**0.0067**
QLD_0861_PFASOMP	SD026	0861_SD026_220401	01 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0031**	-	**0.0031**	-	-	**0.0031**
QLD_0861_PFASOMP	SD026	0861_SD026_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0061**	-	**0.0061**	-	-	**0.0061**
QLD_0861_PFASOMP_23	SD026	0861_SD026_230419	19 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0055**	-	**0.0055**	-	-	**0.0060**
QLD_0861_PFASOMP_23	SD026	0861_SD026_231024	24 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0016**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0240**	-	**0.0240**	-	-	**0.0256**
QLD_0861_PFASOMP_24	SD026	0861_QC103_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0012*	*<0.0002*	*<0.0012*	*<0.0012*	*<0.0002*	*<0.0012*	-	**0.0077**	-	**0.0077**	-	-	**0.0077**
QLD_0861_PFASOMP_24	SD026	0861_QC203_240411	11 Apr 2024	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_24	SD026	0861_SD026_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0013*	*<0.0002*	*<0.0005*	*<0.0013*	*<0.0005*	*<0.0005*	-	**0.0078**	-	**0.0078**	-	-	**0.0078**
QLD_0861_PFAS	SD027	0861_SD027_0_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0165**	-	**0.0178**	-	-	**0.0188**
QLD_0861_PFAS	SD027	0861_QC102_0.0_190502	02 May 2019	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*	*<0.0012*	*<0.0031*	*<0.0031*	*<0.0012*	*<0.0031*	-	**0.0914**	-	**0.0914**	-	-	**0.0914**
QLD_0861_PFAS	SD027	0861_QC202_0.0_190502	02 May 2019	*<0.0002*	*<0.0002*	*<0.0004*	*<0.0004*	*<0.01*	*<0.01*	*<0.002*	*<0.01*	*<0.01*	*<0.002*	*<0.05*	-	**0.068**	-	-	-	-	**0.074**
QLD_0861_PFAS	SD027	0861_SD027_0.0_190502	02 May 2019	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0625**	-	**0.0635**	-	-	**0.0635**
QLD_0861_PFASOMP	SD027	0861_SD027_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0005**	-	**0.0005**	-	-	**0.0005**
QLD_0861_PFASOMP	SD027	0861_SD027_201016	16 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0186**	-	**0.0192**	-	-	**0.0200**
QLD_0861_PFASOMP	SD027	0861_SD027_210330	30 Mar 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0673**	-	**0.0757**	-	-	**0.0802**
QLD_0861_PFASOMP	SD027	0861_SD027_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0091**	-	**0.0096**	-	-	**0.0101**
QLD_0861_PFASOMP	SD027	0861_SD027_220328	28 Mar 2022	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0024*	*<0.0010*	*<0.0024*	*<0.0024*	*<0.0010*	*<0.0024*	-	**0.191**	-	**0.208**	-	-	**0.215**
QLD_0861_PFASOMP	SD027	0861_SD027_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.126**	-	**0.142**	-	-	**0.152**
QLD_0861_PFASOMP_23	SD027	0861_SD027_230417	17 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	**0.0005**	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	-	**0.0051**	-	**0.0051**	-	-	**0.0056**
QLD_0861_PFASOMP_23	SD027	0861_SD027_231024	24 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0002*	*<0.0012*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0273**	-	**0.0276**	-	-	**0.0279**
QLD_0861_PFASOMP_24	SD027	0861_SD027_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0471**	-	**0.0477**	-	-	**0.0486**
QLD_0861_PFAS	SD028	0861_SD28_0.3_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0298**	-	**0.0303**	-	-	**0.0307**
QLD_0861_PFAS	SD028	0861_SD28_0_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0117**	-	**0.0117**	-	-	**0.0117**
QLD_0861_PFAS	SD028	0861_SD028_0.0_190502	02 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0021**	-	**0.0021**	-	-	**0.0021**
QLD_0861_PFASOMP	SD028	0861_QC101_200414	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0071**	-	**0.0071**	-	-	**0.0071**
QLD_0861_PFASOMP	SD028	0861_QC201_200414	14 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD028	0861_QC201_200414	14 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD028	0861_SD028_200414	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0062**	-	**0.0062**	-	-	**0.0062**
QLD_0861_PFASOMP	SD028	0861_SD028_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0085**	-	**0.0085**	-	-	**0.0085**
QLD_0861_PFASOMP	SD028	0861_SD028_210412	12 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	**0.122**	-	**0.122**	-	-	**0.124**
QLD_0861_PFASOMP	SD028	0861_QC154_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0060**	-	**0.0060**	-	-	**0.0060**
QLD_0861_PFASOMP	SD028	0861_QC254_211019	19 Oct 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP	SD028	0861_SD028_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0101**	-	**0.0106**	-	-	**0.0106**
QLD_0861_PFASOMP	SD028	0861_SD028_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0287**	-	**0.0287**	-	-	**0.0287**
QLD_0861_PFASOMP	SD028	0861_SD028_221018	21 Oct 2022	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	**0.0022**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.468**	-	**0.470**	-	-	**0.506**
QLD_0861_PFASOMP_23	SD028	0861_SD028_230509	09 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0130**	-	**0.0130**	-	-	**0.0130**
QLD_0861_Stage2_23	SD028	0861_SD028_230810	10 Aug 2023	*<0.005*	*<0.01*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.01*	**0.0054**	*<0.005*	*<0.01*	*<0.005*	-	**0.022**	-	**0.022**	-	-	*<0.05*
QLD_0861_PFASOMP_23	SD028	0861_SD028_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0211**	-	**0.0218**	-	-	**0.0218**
QLD_0861_PFASOMP_24	SD028	0861_QC100_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0150**	-	**0.0150**	-	-	**0.0154**
QLD_0861_PFASOMP_24	SD028	0861_QC200_240409	09 Apr 2024	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_24	SD028	0861_SD028_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0158**	-	**0.0158**	-	-	**0.0158**
QLD_0861_PFAS	SD030	0861_SD030_0.3_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.112**	-	**0.112**	-	-	**0.113**
QLD_0861_PFAS	SD030	0861_SD030_0_170913	13 Sep 2017	*<0.0005*	**0.0009**	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0470**	-	**0.0617**	-	-	**0.0677**
QLD_0861_PFAS	SD030	0861_QC102_0.0_190429	29 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.159**	-	**0.165**	-	-	**0.173**
QLD_0861_PFAS	SD030	0861_QC202_0.0_190429	29 Apr 2019	*<0.0001*	**0.0003**	**0.0011**	**0.0012**	*<0.001*	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	**0.39**	-	-	-	-	**0.44**
QLD_0861_PFAS	SD030	0861_SD030_0.0_190429	29 Apr 2019	*<0.0005*	**0.0006**	**0.0016**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.204**	-	**0.220**	-	-	**0.237**
QLD_0861_PFAS	SD030	0861_SD030_0.3_190513	13 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0479**	-	**0.0495**	-	-	**0.0502**
QLD_0861_PFASOMP	SD030	0861_SD030_200415	15 Apr 2020	*<0.0005*	**0.0058**	**0.0033**	**0.0014**	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0408**	-	**0.0545**	-	-	**0.0570**
QLD_0861_PFASOMP	SD030	0861_SD030_201016	16 Oct 2020	*<0.0010*	**0.0018**	*<0.0010*	**0.0013**	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0475**	-	**0.0518**	-	-	**0.0576**
QLD_0861_PFASOMP	SD030	0861_QC138_210330	30 Mar 2021	*<0.0005*	**0.0013**	**0.0012**	**0.0010**	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.143**	-	**0.163**	-	-	**0.190**
QLD_0861_PFASOMP	SD030	0861_QC238_210330	30 Mar 2021	*<0.001*	**0.0028**	**0.0024**	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD030	0861_SD030_210330	30 Mar 2021	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0026*	*<0.0064*	*<0.0026*	*<0.0064*	*<0.0064*	*<0.0026*	*<0.0064*	-	**0.114**	-	**0.123**	-	-	**0.131**
QLD_0861_PFASOMP	SD030	0861_QC164_211026	26 Oct 2021	*<0.0005*	**0.0015**	**0.0008**	**0.0012**	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.200**	-	**0.218**	-	-	**0.249**
QLD_0861_PFASOMP	SD030	0861_QC264_211026	26 Oct 2021	*<0.001*	**0.0024**	**0.0017**	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD030	0861_SD030_211026	26 Oct 2021	*<0.0005*	**0.0012**	**0.0008**	**0.0009**	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.143**	-	**0.160**	-	-	**0.188**
QLD_0861_PFASOMP	SD030	0861_SD030_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD030	0861_SD030_221021	21 Oct 2022	*<0.0005*	**0.0025**	**0.0014**	**0.0005**	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0002*	*<0.0012*	-	**0.330**	-	**0.355**	-	-	**0.396**
QLD_0861_PFASOMP_23	SD030	0861_SD030_230417	17 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0101**	-	**0.0103**	-	-	**0.0105**
QLD_0861_PFASOMP_23	SD030	0861_SD030_231024	24 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0411**	-	**0.0415**	-	-	**0.0421**
QLD_0861_PFASOMP_24	SD030	0861_SD030_240409	09 Apr 2024	*<0.0005*	**0.0014**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.189**	-	**0.198**	-	-	**0.206**
QLD_0861_PFAS	SD033	0861_SD033_0.3_170914	14 Sep 2017	*<0.0005*	*<0.0005*	**0.0010**	*<0.0005*	**0.0010**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.246**	-	**0.255**	-	-	**0.261**
QLD_0861_PFAS	SD033	0861_SD033_0_170914	14 Sep 2017	*<0.0005*	*<0.0005*	**0.0023**	**0.0038**	**0.0040**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0451**	-	**0.0525**	-	-	**0.0758**
QLD_0861_PFAS	SD033	0861_SD033_0.0_190503	03 May 2019	*<0.0005*	*<0.0005*	**0.0472**	**0.0215**	**0.0670**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.418**	-	**0.475**	-	-	**0.798**
QLD_0861_PFAS	SD033	0861_SD033_0.3_190503	03 May 2019	*<0.0005*	**0.0006**	**0.0282**	**0.0091**	**0.0330**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.280**	-	**0.315**	-	-	**0.500**
QLD_0861_PFASOMP	SD033	0861_SD033_200427	27 Apr 2020	*<0.0005*	*<0.0005*	**0.0127**	**0.0273**	**0.0314**	*<0.0012*	**0.0006**	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.224**	-	**0.258**	-	-	**0.566**
QLD_0861_PFASOMP	SD033	0861_SD033_201016	16 Oct 2020	*<0.0010*	*<0.0010*	**0.0016**	**0.0011**	**0.0034**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0741**	-	**0.116**	-	-	**0.137**
QLD_0861_PFASOMP	SD033	0861_SD033_210415	15 Apr 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	**0.0179**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**1.00**	-	**1.06**	-	-	**1.17**
QLD_0861_PFASOMP	SD033	0861_SD033_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0034**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.323**	-	**0.334**	-	-	**0.364**
QLD_0861_PFASOMP	SD033	0861_SD033_220405	05 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0038**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.193**	-	**0.205**	-	-	**0.232**
QLD_0861_PFASOMP	SD033	0861_QC194_221025	25 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0008**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.139**	-	**0.144**	-	-	**0.152**
QLD_0861_PFASOMP	SD033	0861_QC294_221025	25 Oct 2022	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD033	0861_SD033_221025	25 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0016**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.221**	-	**0.230**	-	-	**0.249**
QLD_0861_PFASOMP_23	SD033	0861_SD033_230427	27 Apr 2023	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	**0.0182**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.573**	-	**0.618**	-	-	**0.662**
QLD_0861_PFASOMP_23	SD033	0861_SD033_231030	30 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.322**	-	**0.361**	-	-	**0.385**
QLD_0861_PFASOMP_24	SD033	0861_SD033_240409	09 Apr 2024	*<0.0005*	*<0.0005*	**0.0138**	**0.0843**	**0.0289**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.332**	-	**0.374**	-	-	**1.14**
QLD_0861_PFAS	SD034	0861_SD34_0_170601	01 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0815**	-	**0.0831**	-	-	**0.0856**
QLD_0861_PFAS	SD034	0861_SD034_0.0_190430	30 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0055**	-	**0.0055**	-	-	**0.0061**
QLD_0861_PFAS	SD034	0861_SD034_191119	19 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0075**	-	**0.0082**	-	-	**0.0082**
QLD_0861_PFASOMP	SD034	0861_SD034_200414	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0018**	-	**0.0018**	-	-	**0.0018**
QLD_0861_PFASOMP	SD034	0861_SD034_201012	12 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0109**	-	**0.0109**	-	-	**0.0109**
QLD_0861_PFASOMP	SD034	0861_SD034_210412	12 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0323**	-	**0.0328**	-	-	**0.0328**
QLD_0861_PFASOMP	SD034	0861_SD034_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0054**	-	**0.0054**	-	-	**0.0054**
QLD_0861_PFASOMP	SD034	0861_SD034_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0042**	-	**0.0047**	-	-	**0.0059**
QLD_0861_PFASOMP	SD034	0861_SD034_221018	18 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0621**	-	**0.0621**	-	-	**0.0621**
QLD_0861_PFASOMP_23	SD034	0861_SD034_230428	28 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0753**	-	**0.0770**	-	-	**0.0782**
QLD_0861_PFASOMP_23	SD034	0861_SD034_231025	25 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0035**	-	**0.0035**	-	-	**0.0035**
QLD_0861_PFASOMP_24	SD034	0861_SD034_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD036	0861_SED36_0.3_170530	30 May 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0010**	-	**0.0010**	-	-	**0.0010**
QLD_0861_PFAS	SD036	0861_SED36_0_170530	30 May 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0005**	-	**0.0005**	-	-	**0.0005**
QLD_0861_PFAS	SD036	0861_SD036_0_180119	18 Jan 2018	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0015**	-	**0.0015**	-	-	**0.0015**
QLD_0861_PFAS	SD036	0861_SD036_0.0_190501	01 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0041**	-	**0.0041**	-	-	**0.0041**
QLD_0861_PFASOMP	SD036	0861_SD036_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0048**	-	**0.0048**	-	-	**0.0048**
QLD_0861_PFASOMP	SD036	0861_SD036_201014	14 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD036	0861_QC143_210414	14 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0070**	-	**0.0070**	-	-	**0.0714**
QLD_0861_PFASOMP	SD036	0861_QC243_210414	14 Apr 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD036	0861_SD036_210414	14 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0046**	-	**0.0046**	-	-	**0.0046**
QLD_0861_PFASOMP	SD036	0861_QC156_211020	20 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0045*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0043**	-	**0.0043**	-	-	**0.0043**
QLD_0861_PFASOMP	SD036	0861_QC256_211020	20 Oct 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD036	0861_SD036_211020	20 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0015*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD036	0861_SD036_220401	01 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD036	0861_SD036_221019	19 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0100**	-	**0.0102**	-	-	**0.0111**
QLD_0861_PFASOMP_23	SD036	0861_SD036_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD036	0861_SD036_231024	24 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0010*	*<0.0025*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD036	0861_SD036_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	**0.0060**	-	-	**0.0060**
QLD_0861_PFAS	SD037	0861_SD037_0_170913	13 Sep 2017	*<0.0005*	**0.0011**	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0663**	-	**0.0814**	-	-	**0.0850**
QLD_0861_PFAS	SD037	0861_QC102_0.0_190501	01 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0353**	-	**0.0358**	-	-	**0.0358**
QLD_0861_PFAS	SD037	0861_QC202_0.0_190501	01 May 2019	*<0.0001*	**0.0002**	*<0.0001*	**0.0001**	*<0.001*	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	**0.069**	-	-	-	-	**0.079**
QLD_0861_PFAS	SD037	0861_SD037_0.0_190501	01 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.376**	-	**0.388**	-	-	**0.395**
QLD_0861_PFAS	SD037	0861_SD037_0.0_191119	19 Nov 2019	*<0.0005*	**0.0035**	**0.0232**	**0.0045**	**0.0030**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.460**	-	**0.510**	-	-	**0.554**
QLD_0861_PFASOMP	SD037	0861_SD037_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0383**	-	**0.0460**	-	-	**0.0468**
QLD_0861_PFASOMP	SD037	0861_SD037_201014	14 Oct 2020	*<0.0025*	*<0.0095*	*<0.0025*	*<0.0025*	*<0.0025*	*<0.0063*	*<0.0025*	*<0.0063*	*<0.0063*	*<0.0025*	*<0.0063*	-	**1.32**	-	**1.51**	-	-	**1.57**
QLD_0861_PFASOMP	SD037	0861_QC140_210330	30 Mar 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0822**	-	**0.0918**	-	-	**0.0984**
QLD_0861_PFASOMP	SD037	0861_QC240_210330	30 Mar 2021	*<0.001*	*<0.001*	**0.0021**	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD037	0861_SD037_210330	30 Mar 2021	*<0.0005*	*<0.0005*	*<0.0005*	**0.0006**	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0956**	-	**0.104**	-	-	**0.112**
QLD_0861_PFASOMP	SD037	0861_SD037_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0380**	-	**0.0409**	-	-	**0.0434**
QLD_0861_PFASOMP	SD037	0861_SD037_220330	30 Mar 2022	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.149**	-	**0.157**	-	-	**0.158**
QLD_0861_PFASOMP	SD037	0861_SD037_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.205**	-	**0.213**	-	-	**0.223**

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorooctadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP_23	SD037	0861_SD037_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.180**	-	**0.202**	-	-	**0.216**
QLD_0861_PFASOMP_23	SD037	0861_SD037_231027	27 Oct 2023	*<0.0005*	**0.0026**	**0.0009**	*<0.0005*	**0.0017**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0009*	-	**1.24**	-	**1.37**	-	-	**1.43**
QLD_0861_PFASOMP_24	SD037	0861_SD037_240410	10 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	**0.339**	-	**0.351**	-	-	**0.363**
QLD_0861_PFASOMP	SD038	0861_SD038_200414	14 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0207**	-	**0.0278**	-	-	**0.0278**
QLD_0861_PFASOMP	SD038	0861_SD038_201016	16 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFASOMP	SD038	0861_SD038_210330	30 Mar 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0010**	-	**0.0010**	-	-	**0.0010**
QLD_0861_PFASOMP	SD038	0861_SD038_211025	25 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD038	0861_SD038_220330	30 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD038	0861_SD038_221024	24 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0229**	-	**0.0266**	-	-	**0.0302**
QLD_0861_PFASOMP_23	SD038	0861_SD038_230420	21 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0008**	-	**0.0008**	-	-	**0.0008**
QLD_0861_PFASOMP_23	SD038	0861_SD038_231129	29 Nov 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0019**	-	**0.0019**	-	-	**0.0019**
QLD_0861_PFASOMP_24	SD038	0861_SD038_240418	18 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD039	0861_SED39_0.3_170530	30 May 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0008**	-	**0.0008**	-	-	**0.0029**
QLD_0861_PFAS	SD039	0861_SED39_0_170530	30 May 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD039	0861_SD039_0.0_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD039	0861_SD039_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD039	0861_QC126_201014	14 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD039	0861_QC226_201014	14 Oct 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD039	0861_SD039_201014	14 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD039	0861_SD039_210330	30 Mar 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0020**	-	**0.0020**	-	-	**0.0020**
QLD_0861_PFASOMP	SD039	0861_QC160_211022	22 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0014**	-	**0.0019**	-	-	**0.0019**
QLD_0861_PFASOMP	SD039	0861_QC260_211022	22 Oct 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD039	0861_SD039_211022	22 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD039	0861_SD039_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD039	0861_SD039_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD039	0861_SD039_230426	26 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD039	0861_SD039_231026	26 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD039	0861_SD039_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0002*	*<0.0013*	*<0.0013*	*<0.0002*	*<0.0013*	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFAS	SD040	0861_SD40_0_170602	02 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	**0.0003**
QLD_0861_PFAS	SD040	0861_SD040_0.0_190506	06 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0027**	-	**0.0027**	-	-	**0.0027**
QLD_0861_PFAS	SD040	0861_SD040_0.0_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0009**	-	**0.0009**	-	-	**0.0009**
QLD_0861_PFASOMP	SD040	0861_SD040_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0047**	-	**0.0051**	-	-	**0.0051**
QLD_0861_PFASOMP	SD040	0861_SD040_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0015**	-	**0.0015**	-	-	**0.0015**
QLD_0861_PFASOMP	SD040	0861_SD040_210415	15 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0009**	-	**0.0009**	-	-	**0.0009**
QLD_0861_PFASOMP	SD040	0861_SD040_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0039**	-	**0.0039**	-	-	**0.0039**
QLD_0861_PFASOMP	SD040	0861_SD040_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0018**	-	**0.0018**	-	-	**0.0018**
QLD_0861_PFASOMP	SD040	0861_SD040_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD040	0861_SD040_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0035**	-	**0.0035**	-	-	**0.0035**
QLD_0861_PFASOMP_23	SD040	0861_SD040_231026	26 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0134**	-	**0.0134**	-	-	**0.0134**
QLD_0861_PFASOMP_24	SD040	0861_SD040_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0002*	*<0.0013*	*<0.0013*	*<0.0002*	*<0.0013*	-	**0.0021**	-	**0.0021**	-	-	**0.0021**
QLD_0861_PFAS	SD041	0861_SD041_0_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0980**	-	**0.106**	-	-	**0.108**
QLD_0861_PFAS	SD041	0861_QC101_190508	08 May 2019	*<0.0005*	*<0.0005*	**0.0055**	**0.0015**	**0.0080**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.834**	-	**0.897**	-	-	**0.955**
QLD_0861_PFAS	SD041	0861_QC201_190508	08 May 2019	*<0.002*	*<0.002*	**0.0051**	*<0.002*	*<0.02*	*<0.02*	*<0.004*	*<0.02*	*<0.02*	*<0.004*	*<0.1*	-	**0.98**	-	-	-	-	**1.1**
QLD_0861_PFAS	SD041	0861_SD041_0.0_190508	08 May 2019	*<0.0005*	*<0.0005*	**0.0026**	**0.0010**	**0.0050**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.461**	-	**0.495**	-	-	**0.526**
QLD_0861_PFAS	SD041	0861_SD041_191119	19 Nov 2019	*<0.0005*	**0.0014**	**0.0026**	**0.0007**	**0.0026**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.469**	-	**0.531**	-	-	**0.573**
QLD_0861_PFASOMP	SD041	0861_SD041_200415	15 Apr 2020	*<0.0025*	*<0.0025*	**0.0246**	*<0.0025*	**0.0079**	*<0.0063*	*<0.0025*	*<0.0063*	*<0.0063*	*<0.0025*	*<0.0063*	-	**1.44**	-	**1.64**	-	-	**1.74**
QLD_0861_PFASOMP	SD041	0861_SD041_201015	15 Oct 2020	*<0.0050*	*<0.0050*	*<0.0050*	*<0.0050*	**0.0121**	*<0.0126*	*<0.0050*	*<0.0126*	*<0.0126*	*<0.0050*	*<0.0126*	-	**1.46**	-	**1.60**	-	-	**1.70**
QLD_0861_PFASOMP	SD041	0861_SD041_210330	30 Mar 2021	*<0.0012*	*<0.0012*	**0.0040**	**0.0021**	**0.0040**	*<0.0031*	*<0.0012*	*<0.0031*	*<0.0031*	*<0.0012*	*<0.0031*	-	**0.713**	-	**0.749**	-	-	**0.812**
QLD_0861_PFASOMP	SD041	0861_SD041_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0007**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.193**	-	**0.198**	-	-	**0.206**
QLD_0861_PFASOMP	SD041	0861_SD041_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0010**	-	**0.0012**	-	-	**0.0012**
QLD_0861_PFASOMP	SD041	0861_QC188_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0017**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.261**	-	**0.268**	-	-	**0.286**
QLD_0861_PFASOMP	SD041	0861_QC288_221020	20 Oct 2022	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	-	-	*<0.005*	-	*<0.005*	*<0.005*	-
QLD_0861_PFASOMP	SD041	0861_SD041_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0013**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.366**	-	**0.378**	-	-	**0.406**
QLD_0861_PFASOMP_23	SD041	0861_SD041_230418	18 Apr 2023	*<0.0049*	*<0.0049*	*<0.0049*	*<0.0049*	**0.0054**	*<0.0122*	*<0.0049*	*<0.0122*	*<0.0122*	*<0.0049*	*<0.0122*	-	**1.80**	-	**1.84**	-	-	**1.92**
QLD_0861_PFASOMP_23	SD041	0861_SD041_231024	24 Oct 2023	*<0.0005*	**0.0016**	*<0.0030*	*<0.0010*	**0.0044**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0006*	*<0.0005*	-	**1.80**	-	**1.87**	-	-	**1.98**
QLD_0861_PFASOMP_24	SD041	0861_SD041_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	**0.217**	-	**0.235**	-	-	**0.244**
QLD_0861_PFAS	SD043	0861_SD43_0.3_170605	05 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0002**	-	**0.0002**	-	-	**0.0002**
QLD_0861_PFAS	SD043	0861_SD43_0_170605	05 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD043	0861_SD043_0.0_191120	19 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0003**	-	**0.0003**	-	-	**0.0003**
QLD_0861_PFASOMP	SD043	0861_SD043_200428	28 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD043	0861_SD043_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD043	0861_SD043_210415	15 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD043	0861_SD043_211022	22 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD043	0861_SD043_220404	04 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD043	0861_SD043_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD043	0861_SD043_230419	19 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD043	0861_SD043_231026	26 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD043	0861_SD043_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0002*	*<0.0012*	*<0.0012*	*<0.0002*	*<0.0012*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD045	0861_SD45_0_170602	02 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0028**	-	**0.0028**	-	-	**0.0028**
QLD_0861_PFAS	SD045	0861_SD045_0.0_190506	06 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0037**	-	**0.0037**	-	-	**0.0037**
QLD_0861_PFAS	SD045	0861_QC104_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0016**	-	**0.0016**	-	-	**0.0016**
QLD_0861_PFAS	SD045	0861_QC204_1_191120	20 Nov 2019	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.001*	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	**0.0049**	-	-	-	-	**0.0049**
QLD_0861_PFAS	SD045	0861_SD045_0.0_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD045	0861_SD045_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD045	0861_SD045_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0027**	-	**0.0027**	-	-	**0.0027**
QLD_0861_PFASOMP	SD045	0861_SD045_210415	15 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0034**	-	**0.0034**	-	-	**0.0034**
QLD_0861_PFASOMP	SD045	0861_SD045_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0028**	-	**0.0034**	-	-	**0.0034**
QLD_0861_PFASOMP	SD045	0861_SD045_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0026**	-	**0.0026**	-	-	**0.0026**
QLD_0861_PFASOMP	SD045	0861_SD045_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD045	0861_SD045_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0084**	-	**0.0084**	-	-	**0.0100**
QLD_0861_PFASOMP_23	SD045	0861_SD045_231026	26 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0094**	-	**0.0094**	-	-	**0.0094**
QLD_0861_PFASOMP_24	SD045	0861_QC104_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0012*	*<0.0002*	*<0.0012*	*<0.0012*	*<0.0002*	*<0.0012*	-	**0.0041**	-	**0.0041**	-	-	**0.0041**
QLD_0861_PFASOMP_24	SD045	0861_QC204_240412	12 Apr 2024	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_24	SD045	0861_SD045_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0012*	*<0.0002*	*<0.0012*	*<0.0012*	*<0.0002*	*<0.0012*	-	**0.0045**	-	**0.0045**	-	-	**0.0045**
QLD_0861_PFAS	SD047	0861_SD47_0.3_170602	02 Jun 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0060**	-	**0.0062**	-	-	**0.0062**

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP	SD049	0861_SD049_200420	20 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	**0.0003**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0397**	-	**0.0453**	-	-	**0.0463**
QLD_0861_PFASOMP	SD049	0861_SD049_200420	20 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013	<0.0005	<0.0013	<0.0013	<0.0005	<0.0035	-	**0.0353**	-	**0.0353**	-	-	**0.0353**
QLD_0861_PFASOMP	SD049	0861_SD049_201013	13 Oct 2020	<0.0010	<0.0010	<0.0010	<0.0010	**0.0018**	<0.0025	<0.0010	<0.0025	<0.0025	<0.0010	<0.0025	-	**0.104**	-	**0.111**	-	-	**0.114**
QLD_0861_PFASOMP	SD049	0861_SD049_210413	13 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0412**	-	**0.0432**	-	-	**0.0436**
QLD_0861_PFASOMP	SD049	0861_SD049_211020	20 Oct 2021	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0031	<0.0012	<0.0031	<0.0031	<0.0012	<0.0031	-	**0.130**	-	**0.130**	-	-	**0.130**
QLD_0861_PFASOMP	SD049	0861_QC173_220331	31 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0003**	-	**0.0003**	-	-	**0.0003**
QLD_0861_PFASOMP	SD049	0861_QC273_220331	31 Mar 2022	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP	SD049	0861_SD049_220331	31 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0002**	-	**0.0002**	-	-	**0.0002**
QLD_0861_PFASOMP	SD049	0861_QC186_221019	19 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0138**	-	**0.0138**	-	-	**0.0138**
QLD_0861_PFASOMP	SD049	0861_QC286_221019	19 Oct 2022	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP	SD049	0861_SD049_221019	19 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0108**	-	**0.0108**	-	-	**0.0108**
QLD_0861_PFASOMP_23	SD049	0861_SD049_230426	26 Apr 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0639**	-	**0.0652**	-	-	**0.0659**
QLD_0861_PFASOMP_24	SD049	0861_QC102_240410	10 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0025	<0.0010	<0.0025	<0.0025	<0.0002	<0.0025	-	**0.0975**	-	**0.0983**	-	-	**0.0983**
QLD_0861_PFASOMP_24	SD049	0861_QC202_240410	10 Apr 2024	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005	-	-	<0.001	-	<0.002	<0.005	-
QLD_0861_PFASOMP_24	SD049	0861_SD049_240410	10 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0874**	-	**0.0874**	-	-	**0.0874**
QLD_0861_PFAS	SD050	0861_SED50_0.3_170530	30 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0017**	-	**0.0017**	-	-	**0.0017**
QLD_0861_PFAS	SD050	0861_SED50_0_170530	30 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0003**	-	**0.0003**	-	-	**0.0003**
QLD_0861_PFAS	SD050	0861_SD050_0.0_190501	01 May 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0052**	-	**0.0052**	-	-	**0.0052**
QLD_0861_PFAS	SD050	0861_SD050_0.0_191118	18 Nov 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFASOMP	SD050	0861_SD050_200415	15 Apr 2020	<0.0010	**0.0012**	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0025	<0.0025	<0.0010	<0.0025	-	**0.0325**	-	**0.0567**	-	-	**0.0595**
QLD_0861_PFASOMP	SD050	0861_SD050_201014	14 Oct 2020	<0.0010	<0.0010	<0.0010	<0.0010	**0.0034**	<0.0025	<0.0010	<0.0025	<0.0025	<0.0010	<0.0025	-	**0.0336**	-	**0.0347**	-	-	**0.0394**
QLD_0861_PFASOMP	SD050	0861_SD050_210414	14 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0094**	-	**0.0094**	-	-	**0.0094**
QLD_0861_PFASOMP	SD050	0861_SD050_211019	19 Oct 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0034**	-	**0.0040**	-	-	**0.0046**
QLD_0861_PFASOMP	SD050	0861_SD050_220401	01 Apr 2022	<0.0005	<0.0005	<0.0005	<0.0018	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0017**	-	**0.0017**	-	-	**0.0024**
QLD_0861_PFASOMP_23	SD050	0861_SD050_230511	11 May 2023	<0.0005	<0.0005	<0.0005	<0.0005	**0.0016**	<0.0012	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0197**	-	**0.0199**	-	-	**0.0215**
QLD_0861_PFASOMP_23	SD050	0861_SD050_231024	24 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	**0.0003**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0094**	-	**0.0094**	-	-	**0.0097**
QLD_0861_PFASOMP_24	SD050	0861_SD050_240411	11 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFAS	SD051	0861_SD51_0_170602	02 Jun 2017	<0.0005	<0.0005	<0.0005	<0.0005	**0.0051**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0048**	-	**0.0050**	-	-	**0.0222**
QLD_0861_PFAS	SD051	0861_SD051_0.0_190501	01 May 2019	<0.0005	<0.0005	<0.0005	<0.0005	**0.0010**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0311**	-	**0.0357**	-	-	**0.0367**
QLD_0861_PFAS	SD051	0861_SD051_0.0_191118	18 Nov 2019	<0.0005	<0.0005	<0.0005	<0.0005	**0.0007**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0113**	-	**0.0118**	-	-	**0.0129**
QLD_0861_PFASOMP	SD051	0861_SD051_200415	15 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0019**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD051	0861_SD051_201014	14 Oct 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0063**	-	**0.0089**	-	-	**0.0089**
QLD_0861_PFASOMP	SD051	0861_SD051_210413	13 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0005	**0.0014**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0397**	-	**0.0405**	-	-	**0.0448**
QLD_0861_PFASOMP	SD051	0861_SD051_211019	19 Oct 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0087**	-	**0.0108**	-	-	**0.0108**
QLD_0861_PFASOMP	SD051	0861_SD051_220401	01 Apr 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0004**	-	**0.0004**	-	-	**0.0004**
QLD_0861_PFASOMP	SD051	0861_SD051_221020	20 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	**0.0003**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0125**	-	**0.0146**	-	-	**0.0161**
QLD_0861_PFASOMP_23	SD051	0861_SD051_230419	19 Apr 2023	<0.0005	<0.0005	<0.0005	<0.0005	**0.0009**	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0047**	-	**0.0047**	-	-	**0.0060**
QLD_0861_PFASOMP_23	SD051	0861_SD051_231024	24 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0015**	-	**0.0015**	-	-	**0.0015**
QLD_0861_PFASOMP_24	SD051	0861_SD051_240411	11 Apr 2024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFAS	SD052	0861_QC01_SED_170530	30 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFAS	SD052	0861_QC02_SED_170530	30 May 2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.0002	<0.005	-	-	-	-	-	-	-
QLD_0861_PFAS	SD052	0861_QC03_SED_170530	30 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0002**	-	**0.0012**	-	-	**0.0016**
QLD_0861_PFAS	SD052	0861_QC04_SED_170530	30 May 2017	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.0002	<0.005	-	-	-	-	-	-	-
QLD_0861_PFAS	SD052	0861_SED52_0.3_170530	30 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0007**	-	**0.0007**	-	-	**0.0022**
QLD_0861_PFAS	SD052	0861_SED52_0_170530	30 May 2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	**0.0010**
QLD_0861_PFAS	SD052	0861_SD052_0.0_190510	10 May 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFAS	SD052	0861_SD052_191121	21 Nov 2019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFASOMP	SD052	0861_SD052_200420	20 Apr 2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0005	<0.0012	-	**0.0011**	-	**0.0011**	-	-	**0.0011**
QLD_0861_PFASOMP	SD052	0861_SD052_201013	13 Oct 2020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0025	<0.0025	<0.0010	<0.0025	-	<0.0010	-	<0.0010	-	-	<0.0010
QLD_0861_PFASOMP	SD052	0861_SD052_210413	13 Apr 2021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0002**	-	**0.0002**	-	-	**0.0002**
QLD_0861_PFASOMP	SD052	0861_SD052_211020	20 Oct 2021	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0031	<0.0012	<0.0031	<0.0031	<0.0012	<0.0031	-	<0.0012	-	<0.0012	-	-	<0.0012
QLD_0861_PFASOMP	SD052	0861_SD052_220331	31 Mar 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	**0.0004**	<0.0005	<0.0005	<0.0002	<0.0005	-	**0.0005**	-	**0.0005**	-	-	**0.0013**
QLD_0861_PFASOMP	SD052	0861_SD052_221019	19 Oct 2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002
QLD_0861_PFASOMP_23	SD052	0861_SD052_230426	26 Apr 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0006	<0.0002	<0.0006	<0.0006	<0.0002	<0.0006	-	**0.0015**	-	**0.0020**	-	-	**0.0020**
QLD_0861_PFASOMP_23	SD052	0681_QC104_231023	23 Oct 2023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	-	<0.0002	-	<0.0002	-	-	<0.0002

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP_23	SD052	0861_QC204_231023	23 Oct 2023	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_23	SD052	0861_SD052_231023	23 Oct 2023	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP_24	SD052	0861_SD052_240410	10 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD053	0861_SD053_0.55_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0063**	-	**0.0063**	-	-	**0.0063**
QLD_0861_PFAS	SD053	0861_SD053_0_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0403**	-	**0.0456**	-	-	**0.0471**
QLD_0861_PFAS	SD053	SD053_191203	03 Dec 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0020**	-	**0.0020**	-	-	**0.0020**
QLD_0861_PFASOMP	SD053	0861_SD053_200421	21 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD053	0861_SD053_201021	21 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD053	0861_SD053_210419	19 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0089**	-	**0.0089**	-	-	**0.0089**
QLD_0861_PFASOMP	SD053	0861_SD053_211025	25 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0357**	-	**0.0357**	-	-	**0.0357**
QLD_0861_PFASOMP	SD053	0861_SD053_220406	06 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD053	0861_SD053_221024	24 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0104**	-	**0.0108**	-	-	**0.0111**
QLD_0861_PFASOMP_23	SD053	0861_SD053_230420	21 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0242**	-	**0.0248**	-	-	**0.0262**
QLD_0861_PFASOMP_23	SD053	0861_SD053_231129	29 Nov 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0153**	-	**0.0160**	-	-	**0.0165**
QLD_0861_PFASOMP_24	SD053	0861_SD053_240418	18 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0033**	-	**0.0045**	-	-	**0.0050**
QLD_0861_PFAS	SD056	0861_QC102_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0137**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.369**	-	**0.377**	-	-	**0.407**
QLD_0861_PFAS	SD056	0861_QC202_170915	13 Sep 2017	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	**0.003**	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	-	-	-	-	-	-
QLD_0861_PFAS	SD056	0861_SD056_0.4_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0014**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**1.14**	-	**1.14**	-	-	**1.15**
QLD_0861_PFAS	SD056	0861_SD056_0_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0021**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.379**	-	**0.380**	-	-	**0.386**
QLD_0861_PFAS	SD056	0861_SD056_0.0_190501	01 May 2019	*<0.0005*	**0.0005**	*<0.0005*	*<0.0005*	**0.0029**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.388**	-	**0.396**	-	-	**0.412**
QLD_0861_PFAS	SD056	0861_SD056_0.3_190501	01 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0022**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0003*	*<0.0005*	-	**0.336**	-	**0.343**	-	-	**0.353**
QLD_0861_PFAS	SD056	0861_QC102_191118	18 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0010**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0321**	-	**0.0341**	-	-	**0.0356**
QLD_0861_PFAS	SD056	0861_QC201_191118	18 Nov 2019	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	**0.003**	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	**0.092**	-	-	-	-	**0.1**
QLD_0861_PFAS	SD056	0861_SD056_0.0_191118	18 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0006**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0370**	-	**0.0391**	-	-	**0.0404**
QLD_0861_PFAS	SD056	0861_SD056_0.3_191118	18 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0009**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0355**	-	**0.0372**	-	-	**0.0388**
QLD_0861_PFASOMP	SD056	0861_QC105_200415	15 Apr 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.113**	-	**0.122**	-	-	**0.127**
QLD_0861_PFASOMP	SD056	0861_QC205_200415	15 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	**0.0018**	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD056	0861_QC205_200415	15 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.002*	**0.0018**	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD056	0861_SD056_200415	15 Apr 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0060*	*<0.0010*	*<0.0025*	-	**0.0807**	-	**0.0900**	-	-	**0.0920**
QLD_0861_PFASOMP	SD056	0861_SD056_201019	19 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0115**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.143**	-	**0.148**	-	-	**0.167**
QLD_0861_PFASOMP	SD056	0861_SD056_210330	30 Mar 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.641**	-	**0.661**	-	-	**0.680**
QLD_0861_PFASOMP	SD056	0861_SD056_211026	26 Oct 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.637**	-	**0.642**	-	-	**0.649**
QLD_0861_PFASOMP	SD056	0861_SD056_220328	28 Mar 2022	*<0.0005*	*<0.0005*	**0.0006**	*<0.0005*	**0.0019**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**1.93**	-	**1.96**	-	-	**2.04**
QLD_0861_PFASOMP	SD056	0861_QC190_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.798**	-	**0.954**	-	-	**1.00**
QLD_0861_PFASOMP	SD056	0861_QC290_221021	21 Oct 2022	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD056	0861_SD056_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.748**	-	**0.882**	-	-	**0.920**
QLD_0861_PFASOMP_23	SD056	0861_SD056_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0069**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.187**	-	**0.198**	-	-	**0.221**
QLD_0861_PFASOMP_23	SD056	0861_SD056_231024	24 Oct 2023	*<0.0005*	**0.0010**	*<0.0005*	*<0.0005*	**0.0009**	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	**0.421**	-	**0.478**	-	-	**0.498**
QLD_0861_PFASOMP_24	SD056	0861_SD056_240409	09 Apr 2024	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0020*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.434**	-	**0.435**	-	-	**0.435**
QLD_0861_PFAS	SD059	0861_SD059_0.3_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0019**	-	**0.0023**	-	-	**0.0023**
QLD_0861_PFAS	SD059	0861_SD059_0_170913	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0090**	-	**0.0094**	-	-	**0.0094**
QLD_0861_PFAS	SD059	0861_SD059_0.0_190429	29 Apr 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0816**	-	**0.0880**	-	-	**0.0902**
QLD_0861_PFASOMP	SD059	0861_SD059_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0422**	-	**0.0524**	-	-	**0.0537**
QLD_0861_PFASOMP	SD059	0861_SD059_201016	16 Oct 2020	*<0.0005*	**0.0009**	**0.0008**	*<0.0005*	**0.0005**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.156**	-	**0.179**	-	-	**0.192**
QLD_0861_PFASOMP	SD059	0861_SD059_210330	30 Mar 2021	*<0.0005*	**0.0008**	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.264**	-	**0.283**	-	-	**0.294**
QLD_0861_PFASOMP	SD059	0861_SD059_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0009**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.120**	-	**0.133**	-	-	**0.147**
QLD_0861_PFASOMP	SD059	0861_SD059_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD059	0861_SD059_221021	21 Oct 2022	*<0.0005*	*<0.0010*	*<0.0005*	*<0.0005*	**0.0014**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**1.10**	-	**1.14**	-	-	**1.22**
QLD_0861_PFASOMP_23	SD059	0861_QC107_230417	17 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0411**	-	**0.0450**	-	-	**0.0474**
QLD_0861_PFASOMP_23	SD059	0861_QC207_230417	17 Apr 2023	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_23	SD059	0861_SD059_230417	17 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	-	**0.0106**	-	**0.0126**	-	-	**0.0128**
QLD_0861_PFASOMP_23	SD059	0861_SD059_231027	27 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0010**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.419**	-	**0.436**	-	-	**0.464**
QLD_0861_PFASOMP_24	SD059	0861_SD059_240409	09 Apr 2024	*<0.0006*	*<0.0006*	*<0.0006*	*<0.0006*	*<0.0020*	*<0.0016*	*<0.0006*	*<0.0016*	*<0.0016*	*<0.0006*	*<0.0016*	-	**0.625**	-	**0.650**	-	-	**0.676**
QLD_0861_PFAS	SD064	0861_SD064_0.2_171019	19 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.120**	-	**0.128**	-	-	**0.131**
QLD_0861_PFAS	SD064	0861_SD064_0_171019	19 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0421**	-	**0.0466**	-	-	**0.0488**
QLD_0861_PFAS	SD064	0861_SD64_0.0_190513	13 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0809**	-	**0.0846**	-	-	**0.0864**
QLD_0861_PFASOMP	SD064	0861_SD064_200421	21 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0333**	-	**0.0333**	-	-	**0.0333**
QLD_0861_PFASOMP	SD064	0861_SD064_201021	21 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0493**	-	**0.0564**	-	-	**0.0613**
QLD_0861_PFASOMP	SD064	0861_SD064_210419	19 Apr 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.113**	-	**0.113**	-	-	**0.113**
QLD_0861_PFASOMP	SD064	0861_SD064_211025	25 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.104**	-	**0.109**	-	-	**0.113**
QLD_0861_PFASOMP	SD064	0861_SD064_220406	06 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0832**	-	**0.0865**	-	-	**0.0892**
QLD_0861_PFASOMP	SD064	0861_SD064_221024	24 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.313**	-	**0.317**	-	-	**0.327**
QLD_0861_PFASOMP_23	SD064	0861_SD064_230420	21 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0005**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.205**	-	**0.211**	-	-	**0.219**
QLD_0861_PFASOMP_23	SD064	0861_SD064_231129	29 Nov 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.232**	-	**0.236**	-	-	**0.241**
QLD_0861_PFASOMP_24	SD064	0861_SD064_240418	18 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.136**	-	**0.140**	-	-	**0.145**
QLD_0861_PFAS	SD067	0861_SD067_0.1_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0078**	*<0.0005*	**0.0002**	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**1.92**	-	**1.94**	-	-	**1.96**
QLD_0861_PFAS	SD067	0861_SD067_0_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0046**	-	**0.0051**	-	-	**0.0148**
QLD_0861_PFAS	SD067	0861_SD67_0.0_190513	13 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0076**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**1.21**	-	**1.28**	-	-	**1.36**
QLD_0861_PFASOMP	SD067	0861_SD067_200421	21 Apr 2020	*<0.0025*	*<0.0025*	*<0.0025*	*<0.0025*	*<0.0025*	*<0.0062*	*<0.0025*	*<0.0062*	*<0.0062*	*<0.0025*	*<0.0062*	-	**0.135**	-	**0.146**	-	-	**0.15**
QLD_0861_PFASOMP	SD067	0861_SD067_201021	21 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0042**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.170**	-	**0.204**	-	-	**0.238**
QLD_0861_PFASOMP	SD067	0861_SD067_210419	19 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0043**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.341**	-	**0.346**	-	-	**0.372**
QLD_0861_PFASOMP	SD067	0861_SD067_211025	25 Oct 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	**0.0045**	*<0.0024*	*<0.0010*	*<0.0024*	*<0.0024*	*<0.0010*	*<0.0024*	-	**0.873**	-	**0.945**	-	-	**1.02**
QLD_0861_PFASOMP	SD067	0861_SD067_220406	06 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0023**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.822**	-	**0.864**	-	-	**0.932**
QLD_0861_PFASOMP	SD067	0861_SD067_221024	24 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0014**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.576**	-	**0.604**	-	-	**0.657**
QLD_0861_PFASOMP_23	SD067	0861_SD067_230420	21 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0023**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.386**	-	**0.408**	-	-	**0.436**
QLD_0861_PFASOMP_23	SD067	0861_SD067_231129	29 Nov 2023	*<0.0049*	*<0.0049*	*<0.0049*	*<0.0049*	*<0.0049*	*<0.0123*	*<0.0049*	*<0.0123*	*<0.0123*	*<0.0049*	*<0.0123*	-	**1.41**	-	**1.46**	-	-	**1.56**
QLD_0861_PFASOMP_24	SD067	0861_SD067_240418	18 Apr 2024	*<0.0050*	*<0.0050*	*<0.0050*	*<0.0050*	*<0.0050*	*<0.0126*	*<0.0050*	*<0.0126*	*<0.0126*	*<0.0050*	*<0.0126*	-	**1.82**	-	**1.87**	-	-	**1.95**
QLD_0861_PFAS	SD076	0861_SD076_SD_0.4_170912	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0241**	-	**0.0278**	-	-	**0.0282**
QLD_0861_PFAS	SD076	0861_SD076_SD_0_170912	13 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0068**	-	**0.0082**	-	-	**0.0082**
QLD_0861_PFAS	SD076	0861_SD076_0.0_190501	01 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0712**	-	**0.0751**	-	-	**0.0778**
QLD_0861_PFASOMP	SD076	0861_SD076_200415	15 Apr 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0888**	-	**0.127**	-	-	**0.128**
QLD_0861_PFASOMP	SD076	0861_SD076_201016	16 Oct 2020	*<0.0005*	**0.0006**	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	**0.0010**	*<0.0002*	*<0.0005*	-	**0.0398**	-	**0.0627**	-	-	**0.0706**
QLD_0861_PFASOMP	SD076	0861_SD076_210330	30 Mar 2021	*<0.0010*	**0.0014**	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.0926**	-	**0.105**	-	-	**0.112**
QLD_0861_PFASOMP	SD076	0861_SD076_211026	26 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.123**	-	**0.128**	-	-	**0.135**
QLD_0861_PFASOMP	SD076	0861_SD076_220328	28 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0020**	-	**0.0025**	-	-	**0.0025**

TABLE A6: Sediment Analytical Summary

	PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								PFAS					
	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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorootadecanoic acid (PFODA)	Sum of PFAS
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**															
QLD_0861_PFASOMP_23	SD076	0861_SD076_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0407**	-	**0.0434**	-	-	**0.0470**
QLD_0861_PFASOMP_23	SD076	0861_SD076_231027	27 Oct 2023	*<0.0005*	**0.0011**	*<0.0005*	*<0.0010*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.476**	-	**0.514**	-	-	**0.538**
QLD_0861_PFASOMP_24	SD076	0861_SD076_240409	09 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0929**	-	**0.105**	-	-	**0.111**
QLD_0861_PFAS	SD079	0861_SD079_0.2_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0126**	-	**0.0140**	-	-	**0.0140**
QLD_0861_PFAS	SD079	0861_SD079_0_171020	17 Oct 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0402**	-	**0.0432**	-	-	**0.0450**
QLD_0861_PFASOMP	SD079	0861_SD079_200421	21 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.038**	-	**0.0466**	-	-	**0.0506**
QLD_0861_PFASOMP	SD079	0861_SD079_201021	21 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0658**	-	**0.0740**	-	-	**0.0783**
QLD_0861_PFASOMP	SD079	0861_QC146_210419	19 Apr 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0014*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.680**	-	**0.696**	-	-	**0.727**
QLD_0861_PFASOMP	SD079	0861_QC246_210419	19 Apr 2021	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD079	0861_SD079_210419	19 Apr 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.254**	-	**0.262**	-	-	**0.271**
QLD_0861_PFASOMP	SD079	0861_SD079_211025	25 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0175**	-	**0.0175**	-	-	**0.0184**
QLD_0861_PFASOMP	SD079	0861_SD079_220406	06 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0010*	*<0.0012*	*<0.0012*	*<0.0024*	*<0.0012*	-	**0.196**	-	**0.198**	-	-	**0.200**
QLD_0861_PFASOMP	SD079	0861_SD079_221024	24 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0006**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.282**	-	**0.286**	-	-	**0.296**
QLD_0861_PFASOMP_23	SD079	0861_SD079_230420	21 Apr 2023	*<0.0010*	*<0.0010*	**0.0038**	*<0.0014*	**0.0094**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**1.94**	-	**2.04**	-	-	**2.14**
QLD_0861_PFASOMP_23	SD079	0861_SD079_231129	29 Nov 2023	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	**0.0030**	*<0.0031*	*<0.0012*	*<0.0031*	*<0.0031*	*<0.0012*	*<0.0031*	-	**0.460**	-	**0.467**	-	-	**0.482**
QLD_0861_PFASOMP_24	SD079	0861_SD079_240418	18 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0371**	-	**0.0390**	-	-	**0.0407**
QLD_0861_PFAS	SD080	0861_SD80_0.0_190513	13 May 2019	*<0.0005*	**0.0007**	**0.0025**	*<0.0005*	**0.0049**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.190**	-	**0.204**	-	-	**0.221**
QLD_0861_PFAS	SD080	QC102_191203	03 Dec 2019	*<0.0010*	*<0.0010*	**0.0014**	**0.0010**	**0.0021**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.221**	-	**0.228**	-	-	**0.242**
QLD_0861_PFAS	SD080	SD080_191203	03 Dec 2019	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	**0.0023**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.116**	-	**0.120**	-	-	**0.125**
QLD_0861_PFASOMP	SD080	0861_SD080_200421	21 Apr 2020	*<0.0005*	**0.0033**	**0.0092**	**0.0007**	**0.0008**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0965**	-	**0.119**	-	-	**0.132**
QLD_0861_PFASOMP	SD080	0861_SD080_201021	21 Oct 2020	*<0.0005*	**0.0022**	**0.0096**	**0.0015**	**0.0008**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.202**	-	**0.231**	-	-	**0.261**
QLD_0861_PFASOMP	SD080	0861_SD080_210419	19 Apr 2021	*<0.0010*	*<0.0010*	**0.0100**	**0.0024**	**0.0050**	*<0.0024*	*<0.0010*	*<0.0024*	*<0.0024*	*<0.0010*	*<0.0024*	-	**0.924**	-	**0.968**	-	-	**1.06**
QLD_0861_PFASOMP	SD080	0861_SD080_211025	25 Oct 2021	*<0.0010*	**0.0011**	**0.0048**	**0.0038**	**0.0128**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	**0.0013**	*<0.0025*	-	**0.998**	-	**1.03**	-	-	**1.17**
QLD_0861_PFASOMP	SD080	0861_SD080_220406	06 Apr 2022	*<0.0005*	*<0.0005*	**0.0026**	**0.0021**	**0.0034**	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.392**	-	**0.412**	-	-	**0.463**
QLD_0861_PFASOMP	SD080	0861_SD080_221024	24 Oct 2022	*<0.0010*	**0.0021**	**0.0047**	*<0.0010*	**0.0068**	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	**0.667**	-	**0.703**	-	-	**0.820**
QLD_0861_PFASOMP_23	SD080	0861_SD080_230420	21 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0012**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.131**	-	**0.139**	-	-	**0.149**
QLD_0861_PFASOMP_23	SD080	0861_SD080_231129	29 Nov 2023	*<0.0013*	*<0.0013*	*<0.0013*	*<0.0013*	*<0.0038*	*<0.0032*	*<0.0013*	*<0.0032*	*<0.0032*	*<0.0013*	*<0.0032*	-	**0.712**	-	**0.728**	-	-	**0.760**
QLD_0861_PFASOMP_24	SD080	0861_SD080_240418	18 Apr 2024	*<0.0005*	*<0.0005*	*<0.0015*	*<0.0015*	**0.0010**	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.258**	-	**0.276**	-	-	**0.317**
QLD_0861_PFAS	SD088	0861_SD088_0.2_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0004**	-	**0.0004**	-	-	**0.0004**
QLD_0861_PFAS	SD088	0861_SD088_0_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD088	0861_SD088_200420	20 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD088	0861_QC122_201013	13 Oct 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP	SD088	0861_QC222_201013	13 Oct 2020	*<0.001*	*<0.001*	*<0.02*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD088	0861_SD088_201013	13 Oct 2020	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP	SD088	0861_SD088_210413	13 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD088	0861_SD088_211020	20 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0003**	-	**0.0003**	-	-	**0.0003**
QLD_0861_PFASOMP	SD088	0861_QC174_220331	31 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD088	0861_QC274_220331	31 Mar 2022	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD088	0861_SD088_220331	31 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD088	0861_SD088_221019	19 Oct 2022	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.0020*	*<0.0050*	-	*<0.0020*	-	*<0.0020*	-	-	*<0.0020*
QLD_0861_PFASOMP_23	SD088	0861_SD088_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD088	0681_QC105_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD088	0861-_QC205_231023	23 Oct 2023	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_23	SD088	0861_SD088_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD088	0861_SD088_240410	10 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD089	0861_SD089_0.4_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD089	0861_SD089_0_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD089	0861_SD089_0.0_190510	10 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD089	0861_SD089_200420	20 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD089	0861_SD089_201013	13 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD089	0861_SD089_210413	13 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD089	0861_SD089_211020	20 Oct 2021	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0024*	*<0.0010*	*<0.0024*	*<0.0024*	*<0.0010*	*<0.0024*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP	SD089	0861_SD089_220331	31 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0002**	-	**0.0002**	-	-	**0.0002**
QLD_0861_PFASOMP	SD089	0861_SD089_221019	19 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD089	0861_SD089_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD089	0861_SD089_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD089	0861_SD089_240410	10 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD090	0861_SD090_0.25_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD090	0861_SD090_0_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD090	0861_QC102_190510	10 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD090	0861_QC202_190510	10 May 2019	*<0.0002*	*<0.0002*	*<0.0002*	*<0.0002*	*<0.005*	*<0.005*	*<0.002*	*<0.005*	*<0.005*	*<0.002*	*<0.01*	-	**0.0002**	-	-	-	-	**0.0002**
QLD_0861_PFAS	SD090	0861_SD090_0.0_190510	10 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD090	0861_SD090_200420	20 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD090	0861_SD090_201013	13 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0013*	*<0.0005*	*<0.0013*	*<0.0013*	*<0.0005*	*<0.0013*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD090	0861_SD090_210414	14 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0008**	-	**0.0008**	-	-	**0.0008**
QLD_0861_PFASOMP	SD090	0861_SD090_211021	21 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0020*	*<0.0004*	*<0.0006*	*<0.0006*	*<0.0006*	*<0.0006*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD090	0861_SD090_220331	31 Mar 2022	*<0.0010*	*<0.0010*	*<0.0010*	*<0.0012*	*<0.0010*	*<0.0025*	*<0.0010*	*<0.0025*	*<0.0025*	*<0.0010*	*<0.0025*	-	*<0.0010*	-	*<0.0010*	-	-	*<0.0010*
QLD_0861_PFASOMP	SD090	0861_SD090_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0015**	-	**0.0015**	-	-	**0.0018**
QLD_0861_PFASOMP_23	SD090	0861_QC111_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD090	0861_QC211_230522	22 May 2023	-	-	-	-	-	-	-	-	-	-	-	*<0.05*	-	-	-	-	-	-
QLD_0861_PFASOMP_23	SD090	0861_SD090_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD090	0681_QC103_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD090	0861_QC203_231023	23 Oct 2023	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_23	SD090	0861_SD090_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD090	0861_SD090_240410	10 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD091	0861_SD091_0.25_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD091	0861_SD091_0_170914	14 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD091	0861_SD091_0.0_190510	10 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD091	0861_SD091_200420	20 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	*<0.0005*	-	*<0.0005*	-	-	*<0.0005*
QLD_0861_PFASOMP	SD091	0861_SD091_201013	13 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD091	0861_SD091_210414	14 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0016**	-	**0.0016**	-	-	**0.0016**
QLD_0861_PFASOMP	SD091	0861_SD091_211021	21 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD091	0861_SD091_220331	31 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD091	0861_SD091_221021	21 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0010**	-	**0.0013**	-	-	**0.0013**
QLD_0861_PFASOMP_23	SD091	0861_SD091_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*

TABLE A6: Sediment Analytical Summary

				PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								PFAS					
				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)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	FOUEA (70887-84-2)	Sum of PFAS (WA DER List)	Perfluolohexadecanoic acid (PFHxDA)	Perfuorooctadecanoic acid (PFODA)	Sum of PFAS
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.05	0.0001	0.001	0.0002	0.002	0.005	0.0001
Project ID	**Location Code**	**Field ID**	**Date**																		
QLD_0861_PFASOMP_23	SD091	0681_QC102_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_23	SD091	0861_QC202_231023	23 Oct 2023	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP_23	SD091	0861_SD091_231023	23 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP_24	SD091	0861_SD091_240410	10 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD094	0861_SD094_0.2_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0421**	-	**0.0446**	-	-	**0.0539**
QLD_0861_PFAS	SD094	0861_SD094_0_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0003**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.158**	-	**0.163**	-	-	**0.174**
QLD_0861_PFASOMP	SD094	0861_SD094_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0117**	-	**0.0117**	-	-	**0.0117**
QLD_0861_PFASOMP	SD094	0861_QC124_201014	14 Oct 2020	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.0020*	*<0.0050*	-	*<0.0020*	-	**0.0032**	-	-	**0.0032**
QLD_0861_PFASOMP	SD094	0861_QC224_201014	14 Oct 2020	*<0.001*	*<0.001*	*<0.02*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.02*	*<0.005*	-
QLD_0861_PFASOMP	SD094	0861_SD094_201014	14 Oct 2020	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0031*	*<0.0012*	*<0.0031*	*<0.0031*	*<0.0012*	*<0.0031*	-	*<0.0012*	-	*<0.0012*	-	-	*<0.0012*
QLD_0861_PFASOMP	SD094	0861_SD094_210414	14 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0065**	-	**0.0069**	-	-	**0.0069**
QLD_0861_PFASOMP	SD094	0861_SD094_211022	22 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0036**	-	**0.0040**	-	-	**0.0040**
QLD_0861_PFASOMP	SD094	0861_QC177_220401	01 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0109**	-	**0.0132**	-	-	**0.0134**
QLD_0861_PFASOMP	SD094	0861_QC277_220401	01 Apr 2022	*<0.001*	*<0.001*	*<0.001*	*<0.002*	*<0.001*	*<0.002*	*<0.002*	*<0.005*	*<0.002*	*<0.002*	*<0.005*	-	-	*<0.001*	-	*<0.002*	*<0.005*	-
QLD_0861_PFASOMP	SD094	0861_SD094_220401	01 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0085**	-	**0.0104**	-	-	**0.0110**
QLD_0861_PFASOMP	SD094	0861_SD094_221019	19 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0011**	-	**0.0011**	-	-	**0.0011**
QLD_0861_PFASOMP_23	SD094	0861_SD094_230522	22 May 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0002**	-	**0.0002**	-	-	**0.0002**
QLD_0861_PFASOMP_23	SD094	0861_SD094_231024	24 Oct 2023	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.0020*	*<0.0050*	-	*<0.0020*	-	*<0.0020*	-	-	*<0.0020*
QLD_0861_PFASOMP_24	SD094	0861_SD094_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0063**	-	**0.0068**	-	-	**0.0068**
QLD_0861_PFAS	SD098	0861_SD098_0_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0031**	-	**0.0038**	-	-	**0.0038**
QLD_0861_PFAS	SD098	0861_SD098_0.0_190506	06 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0007**	-	**0.0007**	-	-	**0.0007**
QLD_0861_PFAS	SD098	0861_SD098_0.0_191120	20 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0005**	-	**0.0005**	-	-	**0.0005**
QLD_0861_PFASOMP	SD098	0861_SD098_200415	15 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0026**	-	**0.0039**	-	-	**0.0039**
QLD_0861_PFASOMP	SD098	0861_SD098_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0002**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0168**	-	**0.0190**	-	-	**0.0198**
QLD_0861_PFASOMP	SD098	0861_SD098_210415	15 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0079**	-	**0.0093**	-	-	**0.0093**
QLD_0861_PFASOMP	SD098	0861_SD098_211019	19 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0020**	-	**0.0023**	-	-	**0.0023**
QLD_0861_PFASOMP	SD098	0861_SD098_220401	01 Apr 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	**0.0002**	-	-	**0.0002**
QLD_0861_PFASOMP	SD098	0861_SD098_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0022**	-	**0.0022**	-	-	**0.0022**
QLD_0861_PFASOMP_23	SD098	0861_QC108_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0007**	-	**0.0007**	-	-	**0.0007**
QLD_0861_PFASOMP_23	SD098	0861_QC208_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0006**	-	**0.0006**	-	-	**0.0006**
QLD_0861_PFASOMP_23	SD098	0861_SD098_230418	18 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0010**	-	**0.0010**	-	-	**0.0010**
QLD_0861_PFASOMP_23	SD098	0861_SD098_231026	26 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0012**	-	**0.0012**	-	-	**0.0012**
QLD_0861_PFASOMP_24	SD098	0861_SD098_240412	12 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0012*	*<0.0012*	*<0.0002*	*<0.0005*	-	**0.0038**	-	**0.0040**	-	-	**0.0040**
QLD_0861_PFAS	SD099	0861_SD0099_0.4_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0004**	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0274**	-	**0.0274**	-	-	**0.0284**
QLD_0861_PFAS	SD099	0861_SD0099_0_170915	15 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	**0.0021**	*<0.0005*	**0.0002**	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.115**	-	**0.117**	-	-	**0.125**
QLD_0861_PFAS	SD099	0861_SD099_0.0_190507	07 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0067**	-	**0.0067**	-	-	**0.0067**
QLD_0861_PFAS	SD099	0861_SD099_191127	27 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0503**	-	**0.0510**	-	-	**0.0533**
QLD_0861_PFASOMP	SD099	0861_SD099_200421	21 Apr 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0053**	-	**0.0053**	-	-	**0.0053**
QLD_0861_PFASOMP	SD099	0861_SD099_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0110**	-	**0.0134**	-	-	**0.0143**
QLD_0861_PFASOMP	SD099	0861_SD099_210413	13 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0077**	-	**0.0077**	-	-	**0.0144**
QLD_0861_PFASOMP	SD099	0861_SD099_211020	20 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0015*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0083**	-	**0.0083**	-	-	**0.0083**
QLD_0861_PFASOMP	SD099	0861_SD099_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFASOMP	SD099	0861_SD099_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0056**	-	**0.0056**	-	-	**0.0068**
QLD_0861_PFASOMP_23	SD099	0861_SD099_230419	19 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0006*	*<0.0002*	*<0.0006*	*<0.0006*	*<0.0002*	*<0.0006*	-	**0.0047**	-	**0.0047**	-	-	**0.0047**
QLD_0861_PFASOMP_23	SD099	0861_SD099_231024	24 Oct 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0031**	-	**0.0031**	-	-	**0.0031**
QLD_0861_PFASOMP_24	SD099	0861_SD099_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*
QLD_0861_PFAS	SD100	0861_SD100_0.2_170918	18 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0113**	-	**0.0113**	-	-	**0.0113**
QLD_0861_PFAS	SD100	0861_SD100_0_170918	18 Sep 2017	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0021**	-	**0.0021**	-	-	**0.0021**
QLD_0861_PFAS	SD100	0861_QC103_190507	07 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0012**	-	**0.0012**	-	-	**0.0012**
QLD_0861_PFAS	SD100	0861_SD100_0.0_190507	07 May 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0009**	-	**0.0009**	-	-	**0.0009**
QLD_0861_PFAS	SD100	0861_QC204_191127	27 Nov 2019	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.001*	*<0.001*	*<0.0002*	*<0.001*	*<0.001*	*<0.0002*	*<0.005*	-	**0.016**	-	-	-	-	**0.018**
QLD_0861_PFAS	SD100	0861_SD100_0.1_191127	27 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0124**	-	**0.0124**	-	-	**0.0130**
QLD_0861_PFAS	SD100	QC104_191127	27 Nov 2019	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0048**	-	**0.0048**	-	-	**0.0048**
QLD_0861_PFASOMP	SD100	0861_SD100_200421	21 Apr 2020	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.0025*	*<0.001*	*<0.0025*	*<0.0025*	*<0.001*	*<0.0025*	-	**0.003**	-	**0.003**	-	-	**0.003**
QLD_0861_PFASOMP	SD100	0861_SD100_201015	15 Oct 2020	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0024**	-	**0.0024**	-	-	**0.0024**
QLD_0861_PFASOMP	SD100	0861_SD100_210413	13 Apr 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0042**	-	**0.0042**	-	-	**0.0042**
QLD_0861_PFASOMP	SD100	0861_SD100_211020	20 Oct 2021	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0005*	*<0.0012*	*<0.0012*	*<0.0005*	*<0.0012*	-	**0.0028**	-	**0.0028**	-	-	**0.0028**
QLD_0861_PFASOMP	SD100	0861_SD100_220329	29 Mar 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0030**	-	**0.0030**	-	-	**0.0030**
QLD_0861_PFASOMP	SD100	0861_SD100_221020	20 Oct 2022	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	**0.0061**	-	**0.0061**	-	-	**0.0061**
QLD_0861_PFASOMP_23	SD100	0861_SD100_230419	19 Apr 2023	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0012*	*<0.0031*	*<0.0012*	*<0.0031*	*<0.0031*	*<0.0012*	*<0.0031*	-	**0.0014**	-	**0.0019**	-	-	**0.0019**
QLD_0861_PFASOMP_23	SD100	0861_SD100_231024	24 Oct 2023	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0020*	*<0.0050*	*<0.0020*	*<0.0050*	*<0.0050*	*<0.0020*	*<0.0050*	-	*<0.0020*	-	*<0.0020*	-	-	*<0.0020*
QLD_0861_PFASOMP_24	SD100	0861_SD100_240411	11 Apr 2024	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0002*	*<0.0005*	*<0.0005*	*<0.0002*	*<0.0005*	-	*<0.0002*	-	*<0.0002*	-	-	*<0.0002*

Appendix B SAQP

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Prepared for
Department of Defence
ABN: 68 706 814 312

AECOM

PFAS OMP- RAAF Base Amberley Sampling and Analysis Quality Plan

31-Jan-2024
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PFAS OMP- RAAF Base Amberley Sampling and Analysis Quality Plan

Client: Department of Defence

ABN: 68 706 814 312

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Quality Information

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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 per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at RAAF Base Amberley (the Base) in the South Queensland Region.

The SAQP supports the PFAS OMP which was included in the Royal Australian Air Force (RAAF) Base Amberley PFAS Management Area Plan (PMAP) (Defence, 2020), here-in referred to as the OMP.

The purpose of the OMP program is to collect data that will enable Defence to maintain an up-to-date understanding of the distribution, concentration and transport (migration pathways and flow) of PFAS at the RAAF Base Amberley Management Area. 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 PMAP.

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 data quality assurance and quality control (QA/QC) measures to be adopted.
- Define the data collection requirements for the project.

1.3 Scope of Works

To meet the project objectives, the following scope of works are proposed as per the OMP (Defence, 2020):

- Sampling biannually (April 2020, October 2020, April 2021, October 2021, April 2022, October 2022, April 2023, October 2023, April 2024) at:
    - 40 groundwater monitoring wells.
    - 49 co-located surface water (where present) and sediment sampling locations.

  Preparation of reports including a sampling event factual report (following each biannual sampling event) and annual interpretive reports following the completion of each 12-month sampling period.

Since the OMP was issued in 2020 there have been some minor changes in the number of groundwater sampling locations due on-site monitoring wells being destroyed. **Section 4.3.2** to **Section 4.3.4** provides the updated list of sampling locations.

1.4 Guidelines and Legislation

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

- PFAS National Environmental Management Plan (NEMP), Heads of Environmental Protection Agencies (HEPA), version 2.0, 2020.
- National Environment Protection (Assessment of Site Contamination) Measure (NEPM), National Environment Protection Council (NEPC), 2013.
- Department of Defence, Routine Environment Water Quality Monitoring Manual, 2016.
- Department of Defence, Contamination Management Manual (DCMM), 2018 amended 2021.

- Department of Health (DoH), Health Based Guidance Values for PFAS for use in site investigations in Australia, 2019.
- National Health and Medical Research Council (NHMRC), Guidance on PFAS in Recreational Water, August 2019.
- Australian and New Zealand Guidelines, 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality.
- Environmental Protection Policy (Water and Wetland Biodiversity), 2019.

2.0 Site Identification and Conceptual Site Model

2.1 RAAF Base Amberley

The Base is the largest operational air force base in the Defence estate with over 7,000 personnel. It is located 7 kilometres (km) west of Ipswich and 50 km southwest of Brisbane. The facility is approximately 2,030 ha in area and includes the Base itself as well as several parcels of Defence-owned land to the east and south of the Base.

The Base operates two runways. The main runway runs approximately north to south, parallel to the eastern boundary. The second runway is shorter and runs southwest to northeast and is located in the southern part of the Base. Parallel to the main runway is a taxiway that services both runways and provides access to the main hangars. The majority of the operational areas, historical, current and 'planned for the future' are located to the west of the runways and taxiways.

2.2 RAAF Base Amberley Management Area

The RAAF Base Amberley Management Area is identified in the PMAP (Defence, 2020) and has identified risks of exposure to PFAS that require management by Defence, refer to **Figure 1** in **Appendix A**. The extent of the Management Area is the geographical boundaries of the Base. Within this area there are specific PFAS source areas identified as contributing most significantly towards elevated risks that require management. The confirmed primary source areas (CPSA) relevant to this OMP include:

- CPSA A – Former topside aviation fire training area (FTA) and current FTA pad.
- CPSA B – Hangar 410 (Building 410) and former landfill.
- CPSA C – Frogs Hollow former fire training school.
- CPSA D – Sewage treatment plant.
- CPSA E – Historical containment pond.
- CPSA G – Former FTA and operational testing area.
- CPSA J – Former FTA and operational testing area.
- CPSA L – Potential former FTA and operations testing area.
- CPSA M – Former fuel farm 1 and triple interceptor pit.
- CPSA T – Potential location of aircraft F4E incident.
- CPSA V – AFFF wastewater holding tank.
- CPSA W – Fire fighting training school.
- CPSA X – Former structural and open pit FTA.
- CPSA Y – Former secondary FTA.
- CPSA Z – Fuel UST with AFFF listing.
- CPSA AA – Triple interceptor pit at Engine Test Cell facilities 1 and 2.
- CPSA BB – Areas used for irrigation- former grassed runways.
- CPSA CC – Former landfill.
- CPSA DD – HS748 Former fire training area on disused runway.

2.3 Conceptual Site Model

The conceptual site model (CSM) for RAAF Base Amberley is presented in detail in the detailed site investigation (DSI) (CH2M Hill, 2018[1]) which summarises the linkages between sources, pathways and receptors. The CSM is reviewed annually, as part of the ongoing monitoring report (OMR). The most recent OMR was the 2021-2023 OMR, which was issued in draft in January 2024 (AECOM, 2024b).

[1] CH2M Hill, 2018, RAAF Base Amberley PFAS Investigation – Detailed Site Investigation, Rev. 6, November 2018.

3.0 Data Quality Assessment

3.1 Data Quality Objectives

The amended 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 below. This incorporates the DQO information presented in the PMAP (Defence, 2020).

3.1.1 Step 1 – State the Problem

PFAS source zones in soil and groundwater at the Base are contributing to PFAS discharges in surface water and drains from the Base. These discharges present elevated risks to human health and the environment.

Actions will be implemented to reduce these discharges and provide precautionary advice to the community in order to limit exposures. Monitoring is needed to assess the effectiveness of these actions, and to enable informed risk management decisions to protect human health and the environment.

Monitoring will also provide data to evaluate temporal variability and seasonal influence in PFAS concentrations in groundwater and surface water / sediment on- and off-base. This will facilitate refinement of the CSM, allow update of the human health and ecological risk assessment and inform management decisions by Defence and government agencies.

3.1.2 Step 2 – Identify the Goal of the Study

The overall goal of the study is to establish a systematic routine groundwater and surface water / sediment sampling and analysis program to provide current and ongoing information on the distribution and migration of PFAS contaminants of potential concern in groundwater and surface water / sediment in the RAAF Base Amberley Management Area.

Specific goals of the program are to:

- Understand the changes and trends in the nature, extent and magnitude of PFAS concentrations in the groundwater, surface water and sediment within RAAF Base Amberley Management Area to further refine the understanding of the distribution and variability of PFAS in the environment.
- Understand if the nature, extent and magnitude of PFAS concentrations has changed significantly due to management actions and other conditions to warrant a revision to the human health and environmental risk assessments.
- Provide an early warning as PFAS impacted surface water and groundwater migrates off-Base and discharges to surface water in the Bremer River and Warrill Creek.
- Collect additional data to inform future management actions and potential refinement of the RAAF Base Amberley CSM for PFAS.
- Monitor PFAS concentrations in Warrill Creek and in groundwater south of the Base, before and after construction and commissioning of the proposed new sewage treatment plant (STP), which will be designed to extract PFAS from effluent before it is discharged to the watercourse.
- Assess temporal and seasonal variation in the nature and extent of PFAS at the Base.

3.1.3 Step 3 – Identify Information Inputs

To allow assessment of the data against the study goals listed in Step 2 above, the following inputs will be considered:

- Physical site setting.
- Meteorological data including rainfall.
- Previous and new data relevant to PFAS in soil, waters and biota obtained through the detailed site investigation (DSI) (CH2M Hill, 2018).
- Location and types of human and environmental receptors as defined in the DSI CH2M Hill, 2018).
- Surface water and groundwater flow regimes identified in the DSI CH2M Hill, 2018)and its CSM, and further refined as part of the 2019 monitoring events (CH2M Hill, 2019).
- Groundwater, surface water and sediment data collected and analysed for PFAS, per the SAQP.
- Groundwater and surface water elevation data.
- Field observations.
- Advances in laboratory analytical approaches and changes in regulatory requirements.
- Adopted assessment criteria for groundwater, sediment and surface water.
- Sampling event factual reports (e.g. AECOM, 2020, 2021a, 2023a-e)
- Ongoing monitoring interpretive reports (AECOM, 2021b, 2024a).

3.1.4 Step 4 – Define the Boundaries of the Study

The spatial and temporal boundaries that apply for data collection are detailed below and will influence the decision-making process for ongoing monitoring:

- The spatial boundary for data collection and decision making is the RAAF Base Amberley Management Area (refer to **Appendix A**), in particular the key surface water drainage pathways and groundwater between the Base and the Bremer River and Warrill Creek.
    - Surface water and sediment sampling will focus on discharges from the Base to the north east of the Base into the Bremer River and to the south of the Base into Frogs Hollow and Warrill Creek.
    - Surface water and sediment sampling is also proposed upstream of the Base in both the Bremer River and Warrill Creek to monitor for potential transport of PFAS into the Management Area, from upstream polluters to the river and the creek.
    - For groundwater, on-Base sampling will include wells screened in the Alluvium-Tertiary formations (shown to be relatively well connected and can be treated as one hydrogeological unit) and the Walloon Coal Measures.
    - The off-Base sampling will focus on nested wells installed on public land that will monitor hydraulic migration of PFAS to the east and the nested pairs will allow monitoring of vertical migration between hydrogeological units. Nested wells to the south of the Base on State Government owned land (and privately leased) have also been included. Groundwater on this property is used for stock watering and the human health risk assessment (HHRA) has indicated elevated human health risk for consumption of home slaughtered beef on properties to the south of the Base.
- The sampling completed as part of the SAQP includes groundwater, surface water and sediment, at the frequencies defined in **Section 4**. In addition, ad hoc sampling for biota may also be required if changes in PFAS concentration in sediment indicate the need for assessment of the risk to biota.
- The SAQP will cover the implementation period to the extent required by specific characteristics of the Base and surrounds, and behaviour of the plume, measured against specified data trends.

3.1.5 Step 5 – Develop the Analytical Approach

The decision rules can be defined as:

- Analytical selection; all samples will be analysed for the extended PFAS suite.
- Analytical method selection for PFAS is based on achieving appropriate laboratory limits of reporting (LOR) in the various media to be analysed. Standard LOR will be used for the OMP Implementation.
- Sample locations have been selected with the objective of monitoring PFAS trends (temporal and seasonal), providing early warning of changes in the migration of PFAS in surface water and groundwater.
- If the laboratory QA/QC data are within the acceptable ranges, the data will be considered suitable for use.
- If PFAS concentrations are reported above the laboratory LOR, where it was previously <LOR, then it will be considered whether further assessment of the data will be required.
- If the PFAS is reported at a concentration that is above drinking water guideline in groundwater, then it will be considered that further assessment is required and / or notification.
- If the data indicate a change to the risks defined in the DSI, human health risk assessment (HHRA) and ecological risk assessment (ERA), this may warrant further consideration, potentially via further investigation and review of the OMP.
- If the data does not conform with the CSM as outlined in the PMAP, this may warrant further consideration, potentially via further investigation and review of the OMP.

The decision on the acceptance of the analytical data will be made on the basis of the DQIs as follows:

- **Precision:** A quantitative measure of the variability (or reproducibility) of data.
- **Accuracy**: A quantitative measure of the closeness of reported data to the “true” value.

- **Representativeness**: The confidence (expressed qualitatively) that data are representative of each media present on site.
- **Completeness**: A measure of the amount of useable data from a data collection activity.
- **Comparability**: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.

If the DQIs indicates the data to be suitable, then monitoring should be continued as per the OMP. If not, then a revision to the OMP should be undertaken, refer to **Section 3.2** for further details.

3.1.6 Step 6 – Specify Performance or Acceptance Criteria

Specific limits for the works included in the OMP (Defence, 2020) are in accordance with the appropriate guidance made or endorsed by state and national regulations, appropriate indicators of data quality, and standard procedures for field sampling and handling.

It is expected that the most up-to-date investigation criteria endorsed by state and national regulations will be used to determine if data collected as part of the OMP indicates a change in the risk to human health or environmental receptors.

This step also examines the certainty of conclusive statements based on the available new data collected. This should include the following points to quantify tolerable limits:

- A decision can be made based on a certainty assumption of 95% confidence in any given data set. A limit on the decision error will be 5% that a conclusive statement may be a false positive or false negative.
- A decision error in the context of the decision rule presented above would lead to either underestimation or overestimation of the risk level associated with a particular sampling area.
- Sampling errors may occur when the sampling program does not adequately detect the variability of a contaminant from point to point across the site. To address this, the OMP outlines minimum numbers of samples proposed to be collected from each media.
- As such, there may be limitations in the data if aspects of the OMP cannot be implemented. Some examples of this scenario include but are not limited to:
    - Proposed surface water sample locations may be dry at the time of sampling
    - Proposed groundwater well locations are damaged or destroyed and therefore cannot be sampled
    - Proposed samples are not collected due to access being restricted to a given location.
- Limitations in ability to acquire useful and representative information from the data collected. The data are proposed to be collected from multiple locations and sample media. Some examples of this scenario include:
    - Some of the data are proposed to be collected from landholder bores, which are not purpose-built for groundwater monitoring. In some cases, there is limited information on the bore construction, and the likely presence of dedicated pumps or windmills may prevent groundwater depths being accurately recorded while also preventing groundwater being sampled using low flow techniques.
- Measurement errors can occur during sample collection, handling, preparation, analysis and data reduction. To address this the following measures are proposed:
    - Collection of sufficient sample mass to facilitate analysis reported to standard laboratory detections limits. Collection of insufficient sample mass may result in raised detection limits.
    - Field staff to follow a standard procedure when collecting samples, including decontamination of tools, and use of appropriate sample containers and preservation methods.
    - Laboratories to follow a standard procedure when preparing samples for analysis and undertaking analysis.
    - Laboratories to report QA/QC data for comparison with the DQIs established for the SAQP.

As data are collected for the OMP, an analysis of trends will be undertaken with potential outliers identified. This analysis will include data collected as part of the DSI, HHRA and ERA as well as consideration of whether the data is reasonable in relation to the CSM. As more time series data is collected, a statistical approach to determining acceptance criteria may become possible, refer to **Section 3.2** for acceptance criteria for data quality.

3.1.7 Step 7 – Optimise the Design for Obtaining Data

The methodology presented in this SAQP is designed to meet the project objectives described in **Section 1.2** and to achieve the nominated DQOs. Optimisation of the data collection process will be achieved by:

- Working closely with the analytical laboratories and sampling equipment suppliers to ensure that appropriate procedures and processes are developed and implemented prior to and during the fieldwork, to ensure that sample handling, and transport to and processing by the analytical laboratories is appropriate.
- Conducting sampling according to Defence and Australian Standards for the type of sampling being conducted (i.e. groundwater monitoring well sampling versus landholder bore water sampling). These standards are as follows:
  - Department of Defence, DCMM, (July 2018, Amended 2021).
  - Standards Australia (AS/NZS5667.11–1998) *Water Quality – Sampling, part 11: Guidance on sampling of groundwater.*
  - Standards Australia (AS 4482.1-2005) *Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds.*
  - Standards Australia (AS 4482.2-1999) *Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances.*
- Conducting sampling in accordance with AECOM's internal PFAS Sample Collection Guidance.
- Sampling conducted by suitably qualified and experienced field staff.
- Basing the sampling upon a CSM developed using the information available at the implementation of the SAQP. Updating the CSM as new data becomes available in the course of the implementation of the SAQP, as required.
- Progressive review of the data throughout the initial three-year OMP period and modification of sampling programs to optimise the value of data generated.

If the objectives of the SAQP 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.
- 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 2**.

Table 2 Acceptance Criteria for Data Quality Indicators for Sample Analysis

Data Quality Indicators	Acceptance Criteria
Water and Sediment Samples	
Rinsates (where sampling equipment is reused) and Field blanks	Less than the laboratory LOR.
Field duplicates/Inter-lab duplicates	The relative percentage distributions (RPDs) will be assessed as acceptable if less than or equal to 30% as per the NEPM Schedule B3. Where the results shows 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 less than 20 times the LOR and the RPD is less than 50%. • Heterogeneous materials are encountered.
Laboratory duplicates	RPDs less than: • 20% for high level laboratory duplicates (i.e. >20 x LOR). • 50% for medium level laboratory duplicates (i.e. 10 to 20 x LOR).
Matrix spikes	Recoveries between 70-130% of the theoretical recovery or as nominated in the laboratory's QC report, based on their historical database.
Method blanks	Less than the laboratory LOR.
Laboratory control samples	Recoveries between laboratories specified range for each particular analyte / analytical suite.

4.0 Sampling Location Rationale and Methodology

4.1 OMP

The OMP (Defence, 2020) presents an overview of specific monitoring works to be undertaken and provides the basis for the preparation of this SAQP. This scope of work presented in this SAQP is consistent with that detailed in the OMP (Defence, 2020), with the exception of those points of deviation presented in **Section 4.15**.

4.2 Proposed Schedule

4.2.1 Sampling Events

Groundwater, surface water and sediment sampling from across the RAAF Base Amberley Management Area will be performed biannually in April and October, with the first sampling event scheduled to be completed in April 2020.

The proposed schedule of fieldworks is presented in **Table 3** below.

Table 3 Proposed Fieldwork Schedule

Sampling Round No.	Description of works	Proposed Schedule
1	Biannual groundwater, surface water and sediment sampling event	April 2020
2		October 2020
3		April 2021
4		October 2021
5		April 2022
6		October 2022
7		April 2023
8		October 2023
9		April 2024

Groundwater level monitoring at the Base to date has shown variability between end of wet season and end of dry season sampling events with up to 3 m difference.

During the dry season (October 2020), opportunities to collect surface water samples can be limited on-Base as drains are likely to be dry. During the OMP dry season monitoring event, if there is rainfall during the six weeks prior to the scheduled event, then opportunistic sampling of surface water from the Base drains should be conducted to ensure samples are collected.

4.3 Sample Location Rationale

4.3.1 Groundwater Sampling Locations

Groundwater monitoring will be undertaken on selected monitoring wells. The rationale for monitoring well selection for each area is summarised in **Table 4** below.

Table 4 Rationale for Groundwater Monitoring Locations

Area	Rationale
On-Base Alluvium, Tertiary Formation and Walloon Coal Measures aquifers	• Monitor spatial and temporal variations in PFAS concentrations in groundwater concentrations up, down and cross-gradient of source areas. • Assess if groundwater PFAS concentrations in bores to the north, east, west and south of the Base change in response to management measures over time. • Continue to monitor groundwater bores with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations. • Monitor groundwater parallel and perpendicular to the PFAS plume to assist with understanding changes in concentrations in these alignments. • Monitor surface water quality in Bremer River and Warrill Creek to assess PFAS migrating from the source areas via drainage channels. • Monitoring groundwater quality adjacent to the Bremer River and Warrill Creek to assess PFAS migrating from surface water to groundwater. • Assess if groundwater PFAS concentrations in bores to the south of the Base change following redevelopment of the Sewage Treatment Plant.
Off-Base Alluvium, Tertiary Formation and Walloon Coal Measures aquifers	• Monitor spatial and temporal variations in PFAS concentration in the groundwater down gradient of the Base. • Continue to monitor groundwater bores with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations. • Assess if groundwater and surface water PFAS concentrations in change in response to management measures over time. • Monitoring groundwater quality adjacent to the Bremer River and Warrill Creek to assess PFAS migrating from surface water to groundwater.

Note: Off-base sampling on private land will require the agreement of the landholder/leaseholder.

4.3.2 Groundwater Sampling Locations

The groundwater locations to be monitored as part of the sampling events are provided in **Table 5** below and are presented in **Figure 2** in Appendix A.

Table 5 Groundwater sampling locations

Location		Monitoring Well	No. of locations
Source Areas	Major CPSA A Former Topside Aviation FTA and current FTA Fire Pad	MW002*, MW033	2
	Major CPSA B Hangar 410 and Former Landfill	MW047	1
	Major CPSA C Frogs Hollow Former Fire Training School Location	MW037	1
	Major CPSA D Sewage Treatment Plant	MW021, MW032	2
	Moderate CPSA E Historical Containment Pond	MW048	1
	Major CPSA G Former FTA and Operational Testing Area	MW050	1
	Major CPSA J Former FTA and Operational Testing Area	MW005	1

Location		Monitoring Well	No. of locations
	Insignificant PSA L Potential Former Fire Training and Operations Test Area	MW006, MW023, MW028, MW029, MW036	5
	Major CPSA M Former Fuel Farm 1 and Triple Interceptor Pit	MW309	1
	Insignificant PSA T Potential Location of Aircraft F-4E Incident	MW035	1
	Minor CPSA V AFFF Wastewater Holding Tank	MW046	1
	Major CPSA W Fire Fighting Training School	MW026, MW030, MW031, MW042, MW043	5
	Major CPSA X Former Structural and Open Pit FTA Major CPSA Y Former Secondary FTA	MW041	1
	Minor CPSA Z Fuel UST with AFFF listing	MW020	1
	Moderate CPSA AA Triple Interceptor Pits at Engine Test Cell Facilities 1 and 2	MW007	1
	Minor CPSA BB Areas used for irrigation- former grassed runways	MW012	1
	Moderate CPSA CC Former Landfill	MW022	1
	Major CPSA DD HS748 Former FTA on Disused Runway	MW049	1
Off-Base Warrill Creek		*MW054S, MW054D,* MW057S, MW057I	4
On-Base Bremer River		MW024, MW025, MW034, MW044, MW055S, MW055D	6
Off-Base Bremer River		MW056S, MW056I	2

Note: *Italics* indicates well in private property, * MW002 was formerly known as MW2.

4.3.3 Groundwater Level Monitoring

During the DSI (CH2M Hill, 2018), pressure/water level transducers were installed to assess the interconnectivity between surface water and groundwater. The transducers are installed in MW028, MW032, MW034, MW055D, MW055S, MW056I and MW056S. These locations were selected to collect time series measurements of potentiometric head in wells nearest the river gauges (owned by Ipswich City Council or SEQ Water). These locations have been surveyed using high accuracy techniques. Standing water levels and surface water levels will be recorded during the biannual sampling events. Data from pressure/water level transducers at these locations will be downloaded during each biannual sampling event to assist in the assessment of surface water/groundwater connectivity.

One barometer logger was also installed during the DSI to allow for the adjustment of the effects of atmospheric pressure changes on water levels. Only one barologger was installed at the Base, since atmospheric conditions do not vary laterally. Data from the barologger should be collected to correct the loggers if major atmospheric pressure changes occur during the logging period (e.g. storms/fronts).

4.3.4 Surface Water and Sediment Sampling Locations

The surface water and sediment sampling locations to be monitored as part of the sampling events are provided in **Table 6** below and are presented on **Figure 3** in **Appendix A**. A table showing historical and current sample identification numbers is presented in **Appendix B**.

Table 6 Surface Water and Sediment Sampling Locations

Area	Sampling Locations	Number of Locations
On-Base Drains	SD/SW002, SD/SW003, SD/SW008, SD/SW011, SD/SW021, SD/SW027, SD/SW028, SD/SW030, SD/SW033, SD/SW037, SD/SW038, SD/SW041, SD/SW048, SD/SW049, SD/SW053, SD/SW056, SD/SW059, SD/SW079, SD/SW064, SD/SW067, SD/SW076, SD/SW080	22
Warrill Creek	SD/SW004, SD/SW005, SD/SW009, SD/SW015, SD/SW016, SD/SW018, SD/SW020, SD/SW026, SD/SW034, *SD/SW043*, SD/SW099, SD/SW100	12
Bremer River	SD/SW025, SD/SW036, SD/SW039, SD/SW040, SD/SW045, SD/SW047, SD/SW050, SD/SW051, SD/SW052, SD/SW088, SD/SW089, SD/SW090, SD/SW091, SD/SW094, SD/SW098	15

Note: *Italics* indicates well in private property

4.4 Sample Collection and Handling

4.4.1 Groundwater Sampling

The groundwater sampling methodology and schedule are presented in **Table 7**.

Table 7 Groundwater Sampling Methodology and Schedule

Item	Details
Groundwater gauging	The depth to groundwater will be measured in each monitoring well immediately prior to collection of groundwater samples. Gauging of the wells will take place in as short a time as possible, however, it is noted that due to access constraints due to ongoing operations and the large number of wells (40), it is difficult to collect gauging data from all the wells in a short timeframe and may take a few days to complete the gauging.
Sample Collection Methodology	Groundwater samples will be collected from all monitoring wells using no-purge methodology HydraSleeves™, which will be installed to the target depths specified in Appendix B, within the screened interval of the wells for a minimum of 24 hours prior to the sampling round. Monitoring well construction details are presented in Appendix B. Once sampling is completed, new HydraSleeves™ will be deployed to the target depths specified in Appendix B, within the screened interval depth in preparation for the next sampling round.
QA/QC Samples to be Collected	Field QA/QC samples are to include intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), equipment rinsate blank (rinsate) samples and field blank samples. Duplicate samples are to be collected at a minimum frequency of 1 in 10 primary samples. Rinsate samples are to be collected at a rate of one sample per fieldwork day by pouring laboratory supplied PFAS-free deionised water over the decontaminated sampling equipment.

Item	Details
Field Parameters	Field observations, temperature, electrical conductivity (EC), dissolved oxygen (DO), oxidation-reduction potential (ORP), pH and observations of water quality will be recorded for all samples.
Decontamination Procedures	Non-dedicated equipment in contact with groundwater (i.e. interface probe and water quality meter probe) will be decontaminated by being cleaned with a PFAS-free detergent and PFAS-free deionised water supplied by the analytical laboratory.
Sample Analysis	All primary samples will be submitted for PFAS extended suite using the standard levels of detection.
Sampling Schedule	The monitoring at RAAF Base Amberley will include two biannual monitoring events in April and October. Both sampling events will include the sampling of up to 40 groundwater monitoring wells.

4.4.2 Surface Water Sampling

The surface water sampling methodology and schedule is presented in **Table 8**.

Table 8 Surface Water Sampling Methodology and Schedule

Item	Details
Sample Collection Methodology	Samples to be collected from immediately below the water surface to minimise collection of sediment or floating materials in the samples. At each location, a new, laboratory supplied container will be lowered into the water with the cap immediately applied once the container is full.
QA/QC Samples to be Collected	Field QA/QC samples are to include intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), equipment rinsate blank (rinsate) samples and field blank samples. Duplicate samples are to be collected at a minimum frequency of 1 in 10 primary samples. Rinsate samples are to be collected at a rate of one sample per fieldwork day by pouring laboratory supplied PFAS free deionised water over the decontaminated sampling equipment.
Field Parameters	Field observations, temperature, EC, DO, ORP, pH and observations of water quality will be recorded for all samples.
Decontamination Procedures	Non-dedicated equipment in contact with groundwater (i.e. interface probe and water quality meter probe) will be decontaminated by being cleaned with a PFAS-free detergent and PFAS-free deionised water supplied by the analytical laboratory.
Sample Analysis	All primary samples will be submitted for PFAS extended suite using the standard levels of detection.
Sampling Schedule	The monitoring at RAAF Base Amberley will include two biannual monitoring events in April and October. Both sampling events will include the collection of 49 surface water samples.

4.4.3 Sediment Sampling

The sediment sampling methodology and schedule are outlined in **Table 9**.

Table 9 Sediment Sampling Methodology and Schedule

Item	Details
Sample Collection Methodology	Samples representative of potentially deposited sediments to be collected from within the water body if possible. Sediment samples will be collected using a trenching shovel from the base of the drain (where possible), or using a Dormer Piston Sediment Sampler or a hand-grab sample using a clean pair of nitrile gloves. At each location, a new laboratory supplied container will be used for each sample.
QA/QC Samples to be Collected	Field QA/QC samples are to include intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), equipment rinsate blank (rinsate) samples and field blank samples. Duplicate samples are to be collected at a minimum frequency of 1 in 10 primary samples. Rinsate samples are to be collected at a rate of one sample per fieldwork day by pouring laboratory supplied PFAS free deionised water over the decontaminated sampling equipment.
Sample Analysis	All primary samples will be submitted for PFAS extended suite using the standard levels of detection.
Sampling Schedule	The monitoring at RAAF Base Amberley will include two biannual monitoring events in April and October. Both sampling events will include the collection of 49 sediment samples.

4.4.4 Sample Handling and Transport to Laboratory

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. All samples will be placed on ice in eskies immediately after sampling.

All samples will be kept, if possible, at or below 4°C during transit to the laboratory. Prior to sampling, assessment of the analytical holding times will be made and the sampling planned accordingly to help ensure that holding times are not breached or are minimised as far as practicable.

Samples will be transported to the laboratory for analytical testing under standard chain of custody (CoC) documentation. Primary and associated duplicate QA/QC samples will be analysed by ALS Brisbane. The inter-laboratory duplicate samples will be analysed by the National Measurement Institute (NMI) or Eurofins Brisbane laboratory.

4.5 Calibration

The water quality meter will be calibrated each day prior to the commencement of field activities with relevant solutions, including pH, EC and ORP. The calibration will be in accordance with manufacturers' instructions or National Association of Testing Authorities (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 Events Factual Reports.

A calibrated interface probe should be used for the gauging of the monitoring wells with a copy of the calibration certificate included in the Sampling Event Factual Reports.

4.6 Logistics

The laboratory sample containers will be collected from the laboratory prior to the commencement of fieldwork. All samples will be transported to ALS by the field team or a supplied courier at the completion of fieldwork. All inter-laboratory duplicate samples will be couriered direct to the secondary laboratory under a separate CoC documentation for analysis.

4.7 Analytical Suite and Laboratory Analysis Methods

4.7.1 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 (US DOD/DoE) and American Society for Testing and Materials (ASTM) methods as appropriate.

The primary laboratory selected for this program is ALS (NATA Accreditation Number 825). The secondary laboratories selected for this program are NMI (NATA Accreditation Number 198) and Eurofins Brisbane (NATA Accreditation Number 1261).

4.7.2 Analytical Schedule

All media sampled shall be analysed for the extended PFAS suite as outlined in **Table 10** below.

Table 10 Sample Analytical Suite for PFAS

PFAS Group	Compound	CAS No.
Perfluoroalkyl Sulfonic Acids	Perfluorobutane sulfonic acid (PFBS)	375-73-5
	Perfluoropentane sulfonic acid (PFPeS)	2706-91-4
	Perfluorohexane sulfonic acid (PFHxS)	355-46-4
	Perfluoroheptane sulfonic acid (PFHpS)	375-92-8
	Perfluorooctane sulfonic acid (PFOS)	1763-23-1
	Perfluorodecane sulfonic acid (PFDS)	335-77-3
Perfluoroalkyl Carboxylic Acids	Perfluorobutanoic acid (PFBA)	375-22-4
	Perfluoropentanoic acid (PFPeA)	2706-90-3
	Perfluorohexanoic acid (PFHxA)	307-24-4
	Perfluoroheptanoic acid (PFHpA)	375-85-9
	Perfluorooctanoic acid (PFOA)	335-67-1
	Perfluorononanoic acid (PFNA)	375-95-1
	Perfluorodecanoic acid (PFDA)	335-76-2
	Perfluoroundecanoic acid (PFUnDA)	2058-94-8
	Perfluorododecanoic acid (PFDoDA)	307-55-1
	Perfluorotridecanoic acid (PFTrDA)	72629-94-8
	Perfluorotetradecanoic acid (PFTeDA)	376-06-7
Perfluoroalkyl Sulfonamides	Perfluorooctane sulphonamide (FOSA)	754-91-6
	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8
	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2
	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	2448-09-7

PFAS Group	Compound	CAS No.
	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2
	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9
	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6
(n:2) Fluorotelomer Sulfonic Acids	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4
	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0

The current standard laboratory limits of reporting (LOR) are described in **Table 11** below.

Table 11 Laboratory Limits of Reporting

Sample Media	Parameter	Technique/Method Reference	LOR*
Groundwater and Surface Water	Extended PFAS Suite	LC/MS-MS	0.002 – 0.1 µg/L
Sediment	Extended PFAS Suite	LC/MS-MS	0.0002 – 0.001 mg/kg

LC/MS-MS = Liquid chromatography–mass spectrometry, GC = Gas chromatography

*LOR for Australian Laboratory Services (ALS)

4.8 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 Defence Contamination Management Manual (DCCM) naming convention:

PPPP_XX000_ZZZ_YYMMDD

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

e.g. 0861_MW001_191015

Location types and codes are prescribed by Defence and the Site's investigation history.

Primary Sample Types/Location Codes relevant to this OMP include:

- SD = sediment – top depth required
- MW = monitoring well
- SW = surface water - no depth required

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

- Duplicate: PPPP_QC1XX_YYMMDD
- Triplicate: PPPP_QC2XX_YYMMDD
- Rinsate: PPPP_QC3XX_YYMMDD

4.9 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 OMP field and laboratory data collected by AECOM will be uploaded, stored and managed in Defence's ESdat database in accordance with Section 6 of Annex L to the Defence Contamination

Management Manual (Defence, 2018). 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 upload the data from each monitoring event into ESdat prior to submitting the Sampling Event Factual Report.

4.10 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 guidance documents were in circulation in Australia including:

- PFAS NEMP, version 2.0 (HEPA 2020).
- DoH, 2019. Health Based Guidance Values for PFAS for use in site investigations in Australia. 2019.
- NHMRC, 2019. Guidance on PFAS in Recreational Water. August 2019 (NHMRC 2019).
- NEPM 1999, Schedule B1, as amended in 2013 (NEPC, 2013).

The adopted PFAS screening criteria to assess the data generated as part of the OMP are presented in **Table 12** below. This adopts the criteria specified in the PMAP (Defence, 2020).

Table 12 Summary of Adopted Screening Criteria

Pathway	Compound	Criteria	Comment / Reference
Human Health Receptors			
Drinking water - groundwater	PFOS + PFHxS	0.07 µg/L	The values presented are from HEPA (2020). *All groundwater results will be compared to these criteria.*
	PFOA	0.56 µg/L	
Recreational use – surface water	PFOS + PFHxS	2 µg/L	The values presented are from the NHMRC (2019). *All surface water results will be compared to these criteria.*
	PFOA	10 µg/L	
Ecological Receptors			
Freshwater (95% species protection values)	PFOS	0.13 µg/L	The values are from the HEPA (2020). *All surface water and groundwater results will be compared to these criteria.*
	PFOA	220 µg/L	
Freshwater (99% species protection values)	PFOS	0.00023 µg/L	
	PFOA	19 µg/L	

There are no current PFAS screening criteria in Australia for sediment.

4.11 Waste Management

Due to the proposed “no purge” sampling methodology, it is not anticipated that significant volumes of liquid waste would be generated that would require management or disposal.

No waste soil will be generated due to the proposed grab sampling approach.

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

4.12 Quality Assurance/Quality Control Sampling

4.12.1 Field Duplicate and Inter-laboratory Duplicate Samples

Field duplicate (intra-laboratory) duplicate samples and split (inter-laboratory field duplicates) are to be collected and analysed at a minimum frequency of 1 in 10 primary samples.

4.12.2 Rinsate Samples

Rinsate samples are to be collected at a rate of one sample per fieldwork day or at least one rinsate sample per ten primary samples (whichever rate is lower) by pouring laboratory supplied deionised water over the decontaminated sampling equipment.

4.12.3 Field Blank Samples

Field blank samples are to be collected at a rate of one sample per fieldwork day by filling sample containers with laboratory supplied deionised water in the field. This exposes the field blanks to the atmosphere of the sampling site.

4.12.4 Trip Blank Samples

Trip blank samples will be supplied by the laboratory and placed in sample transport eskies at a rate of one per batch of samples. The trip blank samples will be analysed for PFAS to assess if any contaminants have entered the sample containers during sampling or in transit to the laboratory or the container itself.

4.13 Fieldwork Documentation

4.13.1 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 information specific to the sample media as follows:

- Groundwater and surface water samples – comments on the observed characteristics of the sample (e.g. colour, turbidity, odour, sheen) and reported field water quality parameters (pH, EC, DO, ORP, temperature) will be recorded.
- Sediment samples - comments on the morphology of the sample location, the depth, flow direction and strength of water flow (if water is present), the water and sediment/soil colour and odour, and the presence of flora and fauna. The soil/sediment types observed at each sample location will be described using the Unified Soil Classification System (USCS).

The coordinates for each sample location will be noted. The location of quality control (e.g. duplicate and inter-laboratory duplicate) sample collection points will also be noted.

AECOM's tablet-based data capture ('EDCA') system will be utilized by field staff to minimise potential data recording errors and allow on-the-spot identification of potentially erroneous data in comparison to historical data.

4.13.2 Sample Labels

AECOM will utilise the tablet-based ALS 'Compass' sample management application to streamline sample labelling and CoC creation to ensure compliant sample IDs are used in the field.

Sample containers will also be labelled with the sample ID as a failsafe method with the following information:

- AECOM project number.
- Name of sampler.
- Sample ID.
- Date of sample collection.

- Filtered vs non-filtered (for water samples only).

A ball point pen will be used for labelling, to ensure PFAS is not introduced to the samples from permanent markers.

4.13.3 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 (Note: the name of the site is not identified for confidentiality purposes).
- 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 to confirm analyses to be performed and the due date for the analytical results.

4.13.4 Sampling Documentation

Field sampling sheets will be completed for each location, and will include the following information (as appropriate for the media being sampled):

- Name of sampler.
- Sample location.
- Date /time of monitoring/ sampling.
- Sampling method.
- Observations of the sampled media.
- Calibration records.

Records of all equipment calibration will be included in the Sampling Event Factual Reports. Photographs of surface water sampling locations will be taken where permitted.

4.14 Reporting

4.14.1 Sampling Event Factual Report

No later than four weeks following receipt of the laboratory reports, AECOM will prepare and submit a Sampling Event Factual Report to Defence. The report will be in accordance with the latest version (v0.2) of the guidance document (Defence, 2021). Each Sampling Event Factual Report will include:

- Details of the scope of monitoring completed.
- A description of the sampling methodologies used
- A summary of observations made while sampling (e.g. any visual or olfactory observations that may indicate impacts to surface water or groundwater)
- A summary of any changes to the monitoring network condition that may affect data integrity, or require rectification works, and recommendations for repair, replacement of decommissioning of a location
- A presentation of the analysis results in a table that includes comparisons with PFAS guidelines, highlighting any significant statistical deviations from historical monitoring and investigation data
- A presentation of the reduced groundwater levels for the event on a figure with inferred contours and inferred groundwater flow direction
- Discussion of the analytical data quality, including review of the quality control sampling results and laboratory quality control data
- Inclusion of the following information as attachments:
    - Figures
    - Tables
    - Groundwater sampling forms including field water quality parameter measurements;
        i. Chain of custody forms;
        ii. Laboratory analytical certificates; and
        iii. Equipment calibration certificates.

4.14.2 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 report will be in accordance with the latest version (v0.4) of the guidance document (Defence, 2022). Each OMR will include:

- Evidence of compliance with the requirements of the SAQP and meeting stated objectives of the OMP (Defence, 2020).
- Relevant figures depicting sampling locations and site-specific hydrogeological features.
- Laboratory results and analysis including comparison with relevant screening criteria as identified in each OMP (Defence, 2020).
- Assessment and commentary on appropriate QA/QC procedures,
- A review of the CSM and provision of a revised CSM if required.
- Data interpretation, including trends in groundwater concentration, gradient and flow directions.
- Assessment of statistically based trends that may inform decision making when it comes to the revision of an OMP (Defence, 2020).
- A statement as to whether the risk profile has changed overall, or for any specific location at the Site, and a recommendation as to whether this should trigger an OMP and/or PMAP review, or other action.

4.15 Deviations from OMP

While the scope of works and methodology described in this SAQP are generally consistent with that presented in the OMP (Defence, 2020), some points of deviation are noted (refer to **Table 13** below).

Table 13 Deviations from OMP

No.	Description	Rationale
1	Changes to the analytical suite.	The PMAP (Defence, 2020) specified all water samples were to be analysed for major cations and anions. For the first two sampling events in 2020, approximately 20% of samples were analysed for a non-PFAS suite. Following a review of the SAQP, the collection and analysis of samples for non-PFAS analytes is not justified at the Base at this time to meet the requirements of the OMP and hence has been removed from the analytical schedule.
2	Removal of lost / damaged monitoring wells from the OMP.	In 2021, six monitoring wells were not accessible including MW008, MW009, MW015, MW039, MW040 and MW056 (formerly known as MW002). These were removed from the Revision 4 SAQP.
3	Replacement of upstream sampling location along Warrill Creek	Prior to the first OMP sampling event in April 2020, sampling location SW/SD070 was replaced with nearby location SW/SD043. The change was made due to access reasons. SW/SD070 required access from a private property, while SD/SW043 was accessible from Council land.

5.0 References

AECOM, 2020. *PFAS OMP – RAAF Base Amberley Sampling Event Factual Report,* April 2020, Rev 0, July 2020.

AECOM, 2021a. *PFAS OMP – RAAF Base Amberley Sampling Event Factual Report,* October 2020, Rev 0, April 2021.

AECOM 2021b. *PFAS OMP – RAAF Base Amberley Annual Interpretive Report, 2020*, October 2021.

AECOM, 2023a. *PFAS OMP – RAAF Base Amberley Sampling Event Factual Report, March / April 2021,* Rev 3, October 2023.

AECOM, 2023b. PFAS OMP – *RAAF Base Amberley Sampling Event Factual Report, October 2021*, Rev 2, October 2023.

AECOM, 2023c. PFAS OMP – *RAAF Base Amberley Sampling Event Factual Report, April 2022*, Rev 3, October 2023.

AECOM, 2023d. PFAS OMP – *RAAF Base Amberley Sampling Event Factual Report, October/November 2022*, Rev 3, October 2023.

AECOM, 2023e. PFAS OMP – *RAAF Base Amberley Sampling Event Factual Report, April/May 2023*, Rev 4, September 2023.

AECOM, 2024a. PFAS OMP – *RAAF Base Amberley Sampling Event Factual Report, October/November 2023*, Rev 2, January 2024.

AECOM, 2024b. *PFAS OMP – RAAF Base Amberley Ongoing Monitoring Report, 2021 to May 2023*, January 2024 Rev 2 – in draft.

ASC NEPM, 2013a. *Schedule B2. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B2 Guideline on Site Characterisation*.

ASC NEPM, 2013b. *Schedule B4. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B4 Guideline on Site-Specific Health Risk Assessment Methodology*.

ASC NEPM, 2013c. *Schedule B7. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B7 Guideline on Derivation of Health-Based Investigation Levels.*

Australian and New Zealand Guidelines, 2018. *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.*

CH2M Hill, 2018. *RAAF Base Amberley PFAS Investigation – Detailed Site Investigation*, November 2018, Final (Rev6).

CH2M Hill, 2019. RAAF Base Amberley PFAS Seasonal Monitoring Event Report (Rev0, July 2019)

Department of Defence, 2016. *Routine Environment Water Quality Monitoring Manual*.

Department of Defence, July 2018. Amended 2021, *Defence Contamination Management Manual.*

Department of Defence, 2020. *PFAS Area Management Plan- RAAF Base Amberley, Queensland,* September 2020.

Department of Defence, 2021. *PFAS OMP Factual Report Guidance*, Version 0.2, May 2021.

Department of Defence, 2022. *PFAS OMP Interpretive Report Guidance*, Version 0.4, October 2022.

enHealth, 2012a. *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards*.

enHealth, 2012b. *Australian Exposure Factor Guide. Department of Health and Ageing*.

Heads of EPAs Australia and New Zealand (HEPA), 2020. *PFAS National Environmental Management Plan*, version 2.0 January 2020

National Health and Medical Research Council (NHMRC), 2019. *Guidance on PFAS in Recreational Water.* August 2019.

Standards Australia. (1998). AS/NZS 5667.11–1998: Water Quality - Sampling - Guidance on Sampling of Groundwaters.

Standards Australia. (1999). AS 4482.2-1999: Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances.

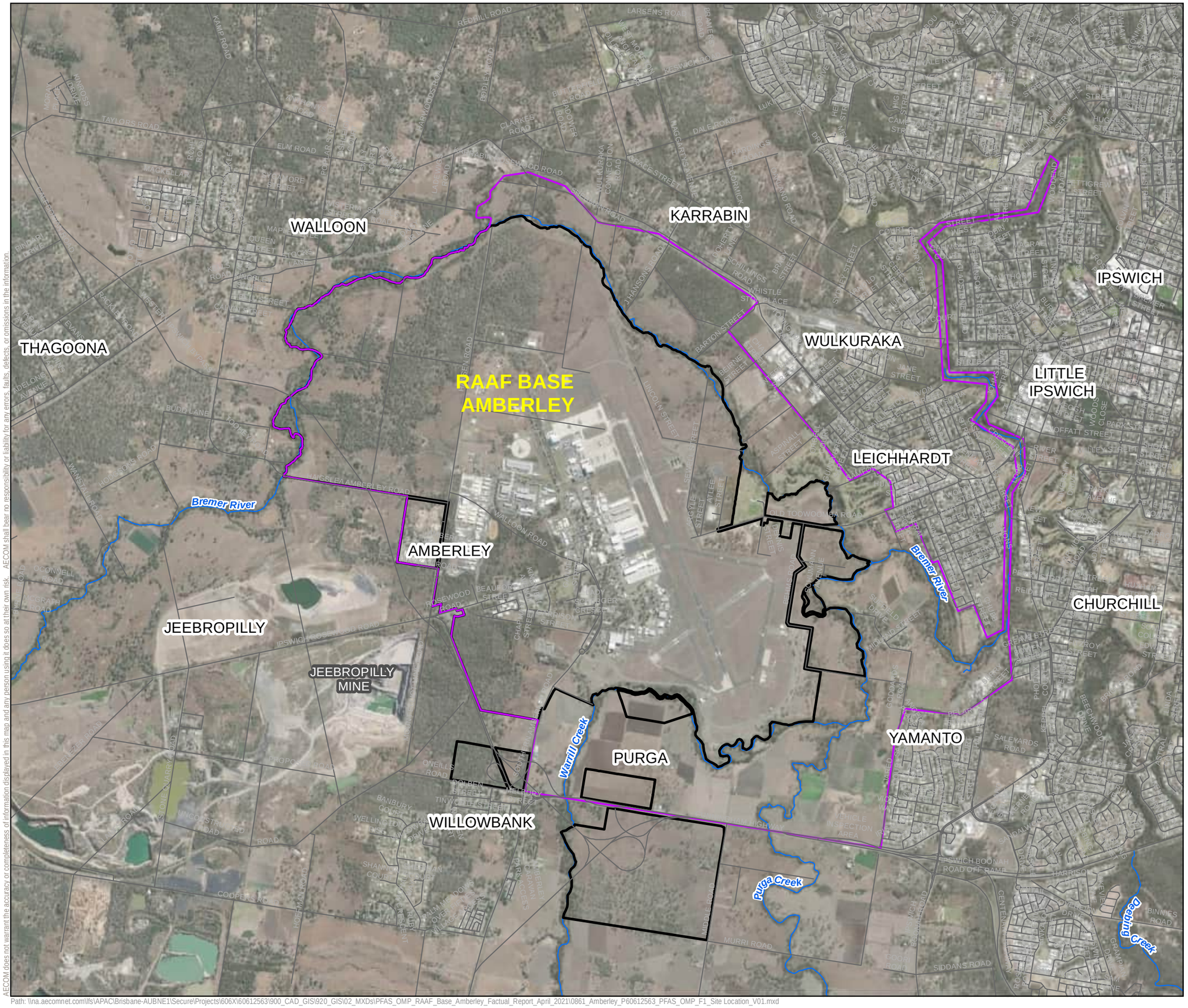
Standards Australia. (2005). AS 4482.1-2005: Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds.

United States Environmental Protection Agency (US EPA), (2006). Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4: EPA/240/B-06/001).

Appendix A

Figures

Appendix A Figures



LEGEND

- Management Area
- Base Boundary
- Watercourses

km
0 0.5 1

AECOM

SCALE 1:38,000
SIZE A3
SHEET
COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE
Figure 1: RAAF BASE AMBERLEY LOCATION

PROJECT
PROJECT: PFAS OMP RAAF BASE AMBERLEY
SAQP

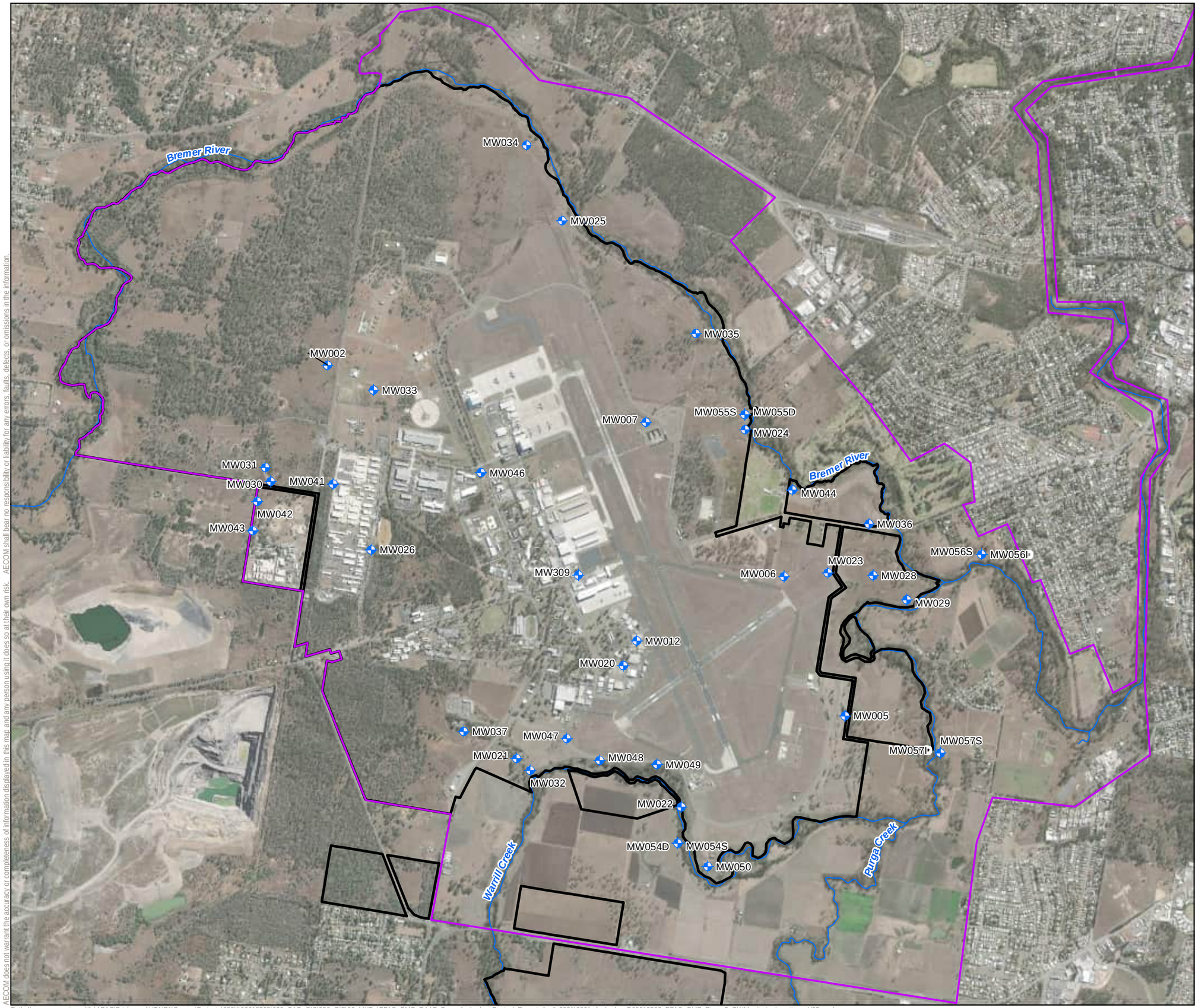
CLIENT
DEPARTMENT OF DEFENCE

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LEGEND

- Groundwater Monitoring Wells
- Management Area
- Base Boundary

N

0 0.5 1 km

AECOM

SCALE 1:26,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 2: Groundwater Monitoring Wells

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY
SAQP

CLIENT

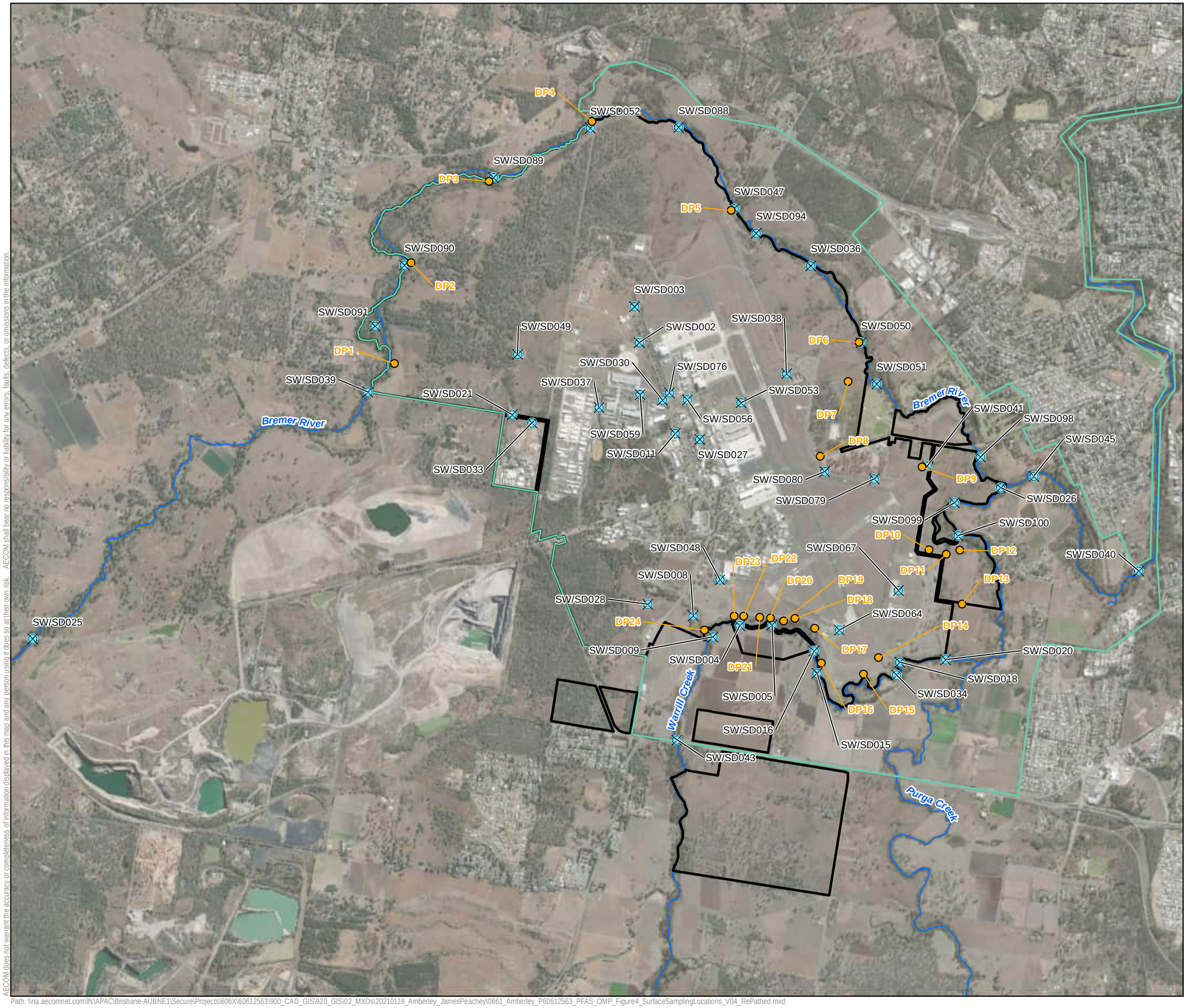
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LEGEND

- Discharge locations
- Surface Water / Sediment Sample
- RAAF Base Amberley (0861) Boundary
- Management Area
- Watercourses

0 0.5 1 km

AECOM

SCALE 1:35,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 3: Surface Water and Sediment Sampling Locations

PROJECT

PFAS OMP – RAAF BASE AMBERLEY

SAQP

CLIENT

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Appendix B

Monitoring Well Construction Details

Appendix B Monitoring Well Construction Details

Monitoring Well Construction Details

Property ID	Well ID	Aquifer	TOC Elevation (mAHD)	Top of screen (mAHD)	Bottom of screen (mAHD)	Target depth of Hydrasleeve (mbtoc)
0861	MW002	Walloon Coal Measures	-	16.70	23.70	22.50
0861	MW005	Alluvium	26.725	13.00	17.00	16.00
0861	MW006	Alluvium	21.937	10.30	14.30	12.50
0861	MW007	Alluvium	23.208	6.00	10.00	9.00
0861	MW012	Tertiary Formation	26.175	12.50	17.50	15.00
0861	MW020	Tertiary Formation	27.043	12.50	16.50	15.00
0861	MW021	Alluvium	20.72	2.50	6.00	4.50
0861	MW022	Alluvium	19.65	4.00	9.00	8.00
0861	MW023	Alluvium	20.51	7.80	11.80	11.00
0861	MW024	Alluvium	20.95	7.00	11.00	10.00
0861	MW025	Alluvium	25.42	7.40	11.40	10.50
0861	MW026	Tertiary Formation	40.24	14.50	17.50	16.00
0861	MW028	Alluvium	20.83	10.50	14.50	12.50
0861	MW029	Alluvium	18.23	7.00	10.00	9.00
0861	MW030	Walloon Coal Measures	35.84	17.00	21.00	19.50
0861	MW309	Tertiary Formation	28.607	13.00	19.00	17.50
0861	MW031	Tertiary Formation	33.45	14.50	20.50	16.50
0861	MW032	Alluvium	26.28	8.00	14.00	12.50
0861	MW033	Walloon Coal Measures	42.456	29.00	33.00	32.00
0861	MW034	Alluvium	24.305	5.00	10.00	8.50
0861	MW035	Alluvium	24.999	8.00	13.50	12.00
0861	MW036	Alluvium	24.04	10.20	15.20	13.00
0861	MW037	Alluvium	25.219	5.00	10.00	9.00
0861	MW041	Walloon Coal Measures	46.383	11.50	14.50	13.00
0861	MW042	Walloon Coal Measures	40.036	24.00	30.00	27.00
0861	MW043	Walloon Coal Measures	49.182	18.00	21.00	19.50
0861	MW044	Alluvium	20.311	8.00	11.00	9.50
0861	MW046	Tertiary Formation	26.001	8.20	11.20	9.50
0861	MW047	Tertiary Formation	26.265	10.50	13.50	11.50
0861	MW048	Alluvium	23.108	7.50	10.50	9.00
0861	MW049	Alluvium	22.044	7.50	10.50	9.00
0861	MW050	Alluvium	24.317	11.50	14.50	13.00
0861	MW054S	Alluvium	24.317	4.00	7.00	6.00
0861	MW054D	Walloon Coal Measures	24.317	18.00	21.00	19.50
0861	MW055S	Alluvium	24.317	9.00	12.00	10.50
0861	MW055D	Walloon Coal Measures	24.317	28.00	34.00	32.00
0861	MW056S	Alluvium	15.078	6.50	9.50	8.50
0861	MW056I	Tertiary Formation	14.762	12.50	15.50	14.50
0861	MW057S	Alluvium	16.479	5.50	8.50	7.50
0861	MW057I	Tertiary Formation	16.494	12.50	15.50	14.00

mbtoc - metres below top of casing
mAHD - metres above Australian Height Datum
TOC - top of casing
` - no data

Appendix C Factual Event Reports

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Prepared for
Department of Defence
ABN: 68706814312

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Sampling Event Factual Report, October / November 2023

PFAS OMP - RAAF Base Amberley

19-Jan-2024
Doc No. 60612563_RP_085_2_240119

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Delivering a better world

Sampling Event Factual Report, October / November 2023

PFAS OMP - RAAF Base Amberley

Client: Department of Defence

ABN: 68706814312

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19-Jan-2024

Job No.: 60612563

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 and ISO45001.

Quality Information

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Ref	60612563
Date	19-Jan-2024
Prepared by	[redacted]
Reviewed by	[redacted]

Revision History

Rev	Revision Date	Details	Authorised	
			Name / Position	Signature
0	20-Dec-2023	Draft	[redacted]	
1	16-Jan-2024	Draft	[redacted]	
2	19-Jan-2024	Final	[redacted]	[redacted]

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Abbreviations

Abbreviation	
AECOM	AECOM Australia Pty Ltd
ALS	Australian Laboratory Services
ANZG	Australian and New Zealand Guidelines
ASC NEPM	Assessment of Site Contamination National Environment Protection Measure 1999 (as amended 2013)
BoM	Bureau of Meteorology
COC	Chain of custody
CPSA	Confirmed Primary Source Area
DCMM	Defence Contamination Management Manual
Defence	Department of Defence
DO	Dissolved oxygen
EC	Electrical conductivity
FTA	Fire Training Area
HEPA	Heads of Environmental Protection Agencies
IP	Interface probe
LNAPL	Light non aqueous phase liquid
LOR	Limit of reporting
NATA	National Association of Testing Authorities
NEMP	National Environmental Management Plan
NHMRC	National Health and Medical Research Council
NMI	National Measurement Institute
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation-reduction potential
PFAS	Per- and poly-fluoroalkyl substances
PFHxS	Perfluorohexane sulfonate
PFOA	Perflurooctanoic acid
PFOS	Perflurooctanesulfonic acid
PMAP	PFAS Management Area Plan
QA / QC	Quality Assurance / Quality Control
RAAF	Royal Australian Air Force
QLD	Queensland
RPD	Relative percent difference
SAQP	Sampling analysis and quality plan
SWL	Standing water level

Units of Measurement			
L	Litres	m	Metre
mg	Milligram	mm	Millimetre
kg	Kilogram	ha	Hectares
mV	Millivolts	S	Siemens
µg	Microgram	cm	Centimetre
mAHD	Metres Australian height datum	mbtoc	Metres below top of casing

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) (Defence, 2020) at the Royal Australian Air Force (RAAF) Base Amberley (the 'Base') and the Management Area in the South Queensland Region. The locations of the Base and Management Area are shown on **Figure 1** in **Appendix A**.

The OMP for RAAF Base Amberley (Defence, 2020) includes the following sampling events:

- Biannual groundwater, surface water and sediment sampling in April and October in 2020, 2021, and 2022.

In July 2022, Defence extended the period for the OMP sampling events by two years with additional groundwater sampling events scheduled for April 2023, October 2023 and April 2024.

Following each biannual sampling event, sampling event factual reports will be prepared. Ongoing monitoring reports (OMRs) will be prepared following the completion of each 12-month sampling period. This sampling event factual report has been prepared to report the results of the biannual sampling event completed in October and November 2023, specifically highlighting first-time detections and / or new exceedances of human health screening criteria for perflurooctanesulfonic acid (PFOS) + perfluorohexane sulfonate (PFHxS) and / or perflurooctanoic acid (PFOA).

This report has been prepared in accordance with the *PFAS OMP Factual Reports Guidance,* v 0.2, May 2021 (Defence, 2021).

1.2 Objectives

The objectives of the OMP are to:

- Implement the OMP prepared as part of the PFAS Management Area Plan (PMAP) (Defence, 2020); and
- Collect data that will enable Defence to maintain an up to date understanding of the distribution, concentration and transport of PFAS at RAAF Base Amberley.

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 PMAP.

The objective of this phase of works was to implement the scope of work for the October / November 2023 sampling event in general accordance with the sampling analysis and quality plan (SAQP) (AECOM, 2023a).

2.0 Scope of Work

The sampling event at RAAF Base Amberley was completed in general accordance with the SAQP (AECOM, 2023a). In summary, the scope of work for this sampling event included:

- Obtaining access to private properties where some groundwater sampling locations are situated.
- Review of the SAQP prior to the monitoring event to ensure compliance with the following:
  - PFAS National Environmental Management Plan (NEMP) V2.0 [Heads of Environmental Protection Agencies (HEPA), 2020];
  - National Environment Protection (Assessment of Site Contamination) Measure 1999, Schedule B1, as amended in 2013 (ASC NEPM, 2013);
  - Defence Routine Environment Water Quality Monitoring Manual, 2018;
  - Defence, Contamination Management Manual, 2018 amended 2021;
  - AS / NZ 5667:1998 Water quality – Sampling (Standards Australia 1998);
  - Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018);
  - Relevant State regulatory guidelines.
- Gauging of groundwater elevation in 39 of 40 monitoring wells prior to collection of samples (refer to **Table 1** below, and **Figure 2** in **Appendix A** for specific locations). One monitoring well (MW049) was not found and could not be gauged, refer to **Table 8** for more details. Due to access issues, five of the wells were gauged one month later than the other wells.
- Collection of groundwater samples at 39 of 40 locations including 33 on-Base monitoring wells and six off-Base monitoring well locations. Details are included in **Table 1** below and **Figure 2** in **Appendix A**. One monitoring well (MW049) was not found and could not be sampled, refer to **Table 8** for more details.
- Collection of co-located surface water and sediment samples at 49 locations, including 42 on-Base locations, and seven off-Base locations (refer below to **Table 2** and **Table 3** and **Figure 3** in **Appendix A**). All 49 sediment samples were collected and 46 of 49 surface water samples. Three sampling locations were dry (SW041, SW052 and SW091) and surface water samples could not be collected during this sampling event. Refer to **Table 8** for more details.
- Downloading groundwater level data from data loggers installed in seven groundwater monitoring wells (MW025, MW028, MW032, MW055S, MW055D, MW056S, MW056I), refer to **Figure 2** in **Appendix A** for data logger locations. Partial data (until 31 January 2023) was downloaded from one datalogger (MW056S), refer to **Table 8** for more details.
- Collection of intra- and inter- laboratory duplicate samples at a rate of 1 in 10 primary samples, one field blank sample per day, one rinsate sample per fieldwork day and one trip blank per batch.
- Analysis of all samples for the PFAS suite at the standard limit of reporting (LOR).
- Data management of all OMP field and laboratory data in the Defence ESdat database.
- Preparation of results letters for off-Base stakeholders.
- Preparation of this Sampling Event Factual Report.

Table 1 Groundwater Sampling Locations

Location		Monitoring Wells
Source Areas	Former Topside Aviation Fire Training Area (FTA) and current FTA Fire Pad (Confirmed Primary Source Area [CPSA] A)	MW002, MW033
	B Hangar 410 and Former Landfill	MW047
	Frogs Hollow Former Fire Training School Location (CPSA B)	MW037
	Sewage Treatment Plant (CPSA D)	MW021, MW032
	Historical Containment Pond (CPSA E)	MW048
	Former Fire Training Area and Operational Testing Area (CPSA G)	MW050
	Former Fire Training Area and Operational Testing Area (CPSA J)	MW005
	Potential Former Fire Training Area and Operations Test Area (CPSA L)	MW006, MW023, MW028, MW029, MW036
	Former Fuel Farm 1 and Triple Interceptor Pit (CPSA M)	MW309
	Potential Location of Aircraft F-4E Incident (CPSA T)	MW035
	AFFF Wastewater Holding Tank (CPSA V)	MW046
	Fire Fighting Training School (CPSA W)	MW026, MW030, MW031, MW042, MW043
	Former Structural and Open Pit Fire Training Area and Former Secondary Fire Training Area (CPSA X and Y)	MW041
	Fuel UST with AFFF listing (CPSA Z)	MW020
	Triple Interceptor Pits at Engine Test Cell Facilities 1 and 2 (CPSA AA)	MW007
	Areas used for irrigation – former grassed runways (CPSA BB)	MW012
	Former Landfill (CPSA CC)	MW022
	Former Fire Training Area on Disused Runway (CPSA DD)	MW049
Off-Base Warrill Creek		*MW054S, MW054D,* MW057S, MW057I
On-Base Bremer River		MW024, MW025, MW034, MW044, MW055S, MW055D
Off-Base Bremer River		MW056S, MW056I

Note: *Italics* indicates that the well is located on private property.
Wells with S, D or I are adjacent monitoring wells that are screened in different aquifers. 'S' indicates the well is screened in the shallow aquifer, 'D' or 'I' indicates the well is screened in the deeper aquifer, either Tertiary Formation or Walloon Coal Measures. MW056I and MW057I were previously known as MW056D and MW057D. MW002 was formerly known as MW2.

Table 2 Surface Water Sampling Locations

Area	Surface Water Sampling Locations	Number of Locations
On-Base Drains	SW002, SW003, SW008, SW011, SW021, SW027, SW028, SW030, SW033, SW037, SW038, SW041, SW048, SW049, SW053, SW056, SW059, SW064, SW067, SW076, SW079, SW080	22
Warrill Creek	SW004, SW005, SW009, SW015, SW016, SW018, SW020, SW026*, SW034, SW043*, SW099, SW100	12
Bremer River	SW025*, SW036, SW039*, SW040*, SW045*, SW047, SW050, SW051, SW052, SW088, SW089, SW090, SW091, SW094, SW098*	15

Note: * denotes off-Base sampling location.

Table 3 Sediment Sampling Locations

Area	Sediment Sampling Locations	Number of Locations
On-Base Drains	SD002, SD003, SD008, SD011, SD021, SD027, SD028, SD030, SD033, SD037, SD038, SD041, SD048, SD049, SD053, SD056, SD059, SD079, SD064, SD067, SD076, SD080	22
Warrill Creek	SD004, SD005, SD009, SD015, SD016, SD018, SD020, SD026*, SD034, SD043*, SD099, SD100	12
Bremer River	SD025*, SD036, SD039*, SD040*, SD045*, SD047, SD050, SD051, SD052, SD088, SD089, SD090, SD091, SD094, SD098*	15

Note: * denotes off-Base sampling location.

3.0 Methodology

The methodology used for the October / November 2023 sampling event was completed in general accordance with the SAQP (AECOM, 2023a) and is summarised below. Deviations from the SAQP are discussed in **Section 3.6**.

3.1 Groundwater Sampling Methodology

The groundwater sampling methodology is outlined in **Table 4** below.

Table 4 Groundwater Sampling Methodology

Item	Details
Groundwater gauging	The depth to groundwater was measured in each monitoring well using an interface probe (IP) prior to the installation of HydraSleeves™, or if HydraSleeves™ were already installed, prior to retrieval of the HydraSleeve™. Where water level transducers were installed, the well was gauged prior to the removal of the water level transducer. Gauging was conducted in as short a time as possible, however, due to the number of wells and different requirements for accessing the monitoring well locations, the gauging took place over six days between 23 and 30 October 2023. Five wells could not be accessed in October 2023 and were gauged approximately one month later on 29 November 2023. Water level transducers are installed in seven monitoring wells to continuously record groundwater levels (MW025, MW028, MW032, MW055S, MW055D, MW056S, MW056I). A barometric logger is installed in MW028. Data were downloaded from the transducers in all seven monitoring wells. Monitoring well MW056S was not found in the previous two sampling events (in October 2022 and April 2023) but was located during this sampling round. Partial data (up 31 January 2023) was collected from the water level transducer. The datalogger was reset and reinstalled in the well. Groundwater level data are presented in **Appendix G**.
Field parameters	Temperature, electrical conductivity (EC), dissolved oxygen (DO), oxidation-reduction potential (ORP), pH and observations of water quality were recorded for all groundwater samples. Field parameters were obtained ex situ, using water remaining in the HydraSleeve™ following sampling. The probe on the water quality meter was decontaminated prior to being placed in the water sample.
Sampling methodology	Groundwater samples were collected from the monitoring wells using no-purge methodology HydraSleeves™, which were installed within the screened interval of each well (based on a review of the well construction log) for a minimum of 24 hours prior to the sampling round. Once sampling was completed, new HydraSleeves™ were deployed at the screened interval depth in 18 of the monitoring wells in preparation for the next sampling round. HydraSleeves™ were not installed in 22 monitoring wells as they are regularly used for monitoring on other programs. Due to limited access to airside locations during the sampling event, bailers were used to collect groundwater samples from three monitoring wells, MW06, MW007 and MW023.
QA / QC samples	Field QA / QC (Quality Assurance / Quality Control) samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), field blanks, rinsate samples and trip blanks. Refer to **Appendix C** for assessment of QA / QC sample data. Equipment calibration certificates are presented in **Appendix F**.
Sample analysis	All primary samples were submitted for analysis for the PFAS suite using the standard LOR. Australian Laboratory Services Environmental (ALS) Brisbane, Queensland was used as the primary laboratory. The National Measurement Institute (NMI) of Sydney, New South Wales (NSW) was used as the secondary laboratory. ALS and NMI methods for groundwater analyses are certified by the National Association of Testing Authorities (NATA). Chain of custody (COC) forms are presented in **Appendix D**, laboratory analytical certificates are presented in **Appendix E**.

3.2 Surface Water Sampling Methodology

The methodology used for the October / November 2023 sampling event was completed in general accordance with the SAQP (AECOM, 2023a) and is summarised in **Table 5** below.

Table 5 Surface Water Sampling Methodology

Item	Details
Field parameters	Temperature, EC, DO, ORP, pH and observations of water quality were recorded for all surface water samples.
Sample collection methodology	Samples were collected from immediately below the water surface to minimise collection of sediment or floating materials in the samples. At each location, a new, laboratory supplied container was lowered into the water with the cap immediately applied once the container was full.
QA / QC Samples	Field QA / QC samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), field blanks, rinsate samples and trip blanks. Refer to **Appendix C** for assessment of QA / QC sample data. Equipment calibration certificates are presented in **Appendix F**.
Sample analysis	All primary samples were submitted for PFAS suite using the standard LOR. ALS Brisbane, Queensland was used as the primary laboratory. NMI of Sydney, NSW was used as the secondary laboratory. ALS and NMI methods for surface water analyses were certified by the NATA. COC forms are presented in **Appendix D**, laboratory analytical certificates are presented in **Appendix E**.

3.3 Sediment Sampling Methodology

The methodology used for the October / November 2023 sampling event was completed in general accordance with the SAQP (AECOM, 2023a) and is summarised in **Table 6** below.

Table 6 Sediment Sampling Methodology

Item	Details
Sample collection methodology	Samples representative of potentially deposited sediments were collected from within the water body where possible. Sediment samples were collected either by hand using new nitrile gloves or from the scoop on the sampling pole. A new laboratory-supplied container was filled at each location.
Logging	Sediment characterisation details were recorded for each sample.
QA / QC samples	Field QA / QC samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), field blanks, rinsate samples and trip blanks. Refer to **Appendix C** for assessment of QA / QC sample data. Equipment calibration certificates are presented in **Appendix F**.
Sample analysis	All primary samples were submitted for PFAS suite using the standard LOR. ALS Brisbane, Queensland was used as the primary laboratory. NMI of Sydney, NSW was used as the secondary laboratory. ALS and NMI methods for sediment analyses were certified by the NATA. COC forms are presented in **Appendix D**, laboratory analytical certificates are presented in **Appendix E**.

3.4 Adopted Screening Criteria

Adopted screening criteria references national guidance in the form of the PFAS NEMP, Defence estate and environmental strategies, and Defence PFAS-specific strategies and guidance. Guidance documents used to assess the dataset includes the following:

- PFAS NEMP, V2.0 (HEPA, 2020);
- Department of Health, 2019. *Health Based Guidance Values for PFAS for use in site investigations in Australia,* September 2019;
- National Health and Medical Research Council, 2019. *Guidance on PFAS in Recreational Water*, August 2019 (NHMRC, 2019);
- *National Environment Protection (Assessment of Site Contamination) Measure 1999, Schedule B1, as amended in 2013* (ASC NEPM, 2013).

In accordance with the OMP (Defence, 2020) and SAQP (AECOM, 2023a), the adopted PFAS screening criteria to assess the data generated as part of the OMP are presented in **Table 7** below.

Table 7 Summary of Adopted Screening Criteria

Pathway	Compound	Criteria	Comment / Reference
Human Health Receptors			
Drinking water – groundwater	PFOS + PFHxS	0.07 µg/L	The values are from the PFAS NEMP (HEPA, 2020). *All groundwater results will be compared to these criteria.*
	PFOA	0.56 µg/L	
Recreational use – surface water	PFOS + PFHxS	2 µg/L	The values presented are from the PFAS NEMP (HEPA, 2020), which are sourced from NHMRC (2019). *All surface water results will be compared to these criteria.*
	PFOA	10 µg/L	
Ecological Receptors			
Freshwater (95% species protection values)	PFOS	0.13 µg/L	The values are from the PFAS NEMP (HEPA, 2020). *All surface water and groundwater results will be compared to these criteria.*
	PFOA	220 µg/L	
Freshwater (99% species protection values)	PFOS	0.00023 µg/L	
	PFOA	19 µg/L	

There are no current HEPA (2020) endorsed human health or ecological guideline values available for PFAS in sediment.

3.5 Data Quality Objectives and Data Validation

The data quality objectives and data quality indicators adopted for these works are presented in the SAQP (AECOM, 2023a).

Data validation assessment is provided in **Appendix C**. 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.

All data collected during this event has been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual (Defence, 2018) Annex L Guidance on Data Management (amended 2021) requirements.

3.6 Deviations from the SAQP

Table 8 lists the deviations from the SAQP (AECOM, 2023a) during this sampling event. The deviations are considered to be of low significance and have a minimal impact on the sampling event results.

Table 8 Deviations from the SAQP during Sampling Event for October / November 2023

SAQP	October / November 2023 Sampling Event	Impact on OMP Program
Collection of groundwater samples at 40 locations	• MW049 was not sampled as it could not be found due to the presence of dense vegetation.	• The non-sampling of MW049 reduces the spatial coverage of the groundwater monitoring network to the south of the Base.
Collection of surface water samples at 49 locations	• Three surface water samples were not collected at SW041, SW052 and SW091 as these locations were dry during the first visit in October 2023 and the sampling locations were not accessible due to Base operations during the second visit on 29 November 2023.	• The non-sampling of SW041 (drain) and SW052 and SW091, both located along the Bremer River means there are no data available to evaluate PFAS concentrations at these locations. The non-presence of water means there were no PFAS migrating in surface water at the time of the visit. Upstream and downstream locations along the Bremer River were sampled.
Collection of sediment samples at 49 locations	• All 49 sediment samples were collected and submitted to the laboratory. The laboratory reported that 48 of the sediment samples were received with the sample from SD049 not received. Consequently, there are no analytical results available for this sample.	• No PFAS data are available for sediment sampling location SD049, an on-Base drain. As co-located surface water results are available at this location, the data gap is considered of low significance.
Groundwater methodology	• Due to limited time available to access airside locations, three monitoring wells, MW006, MW007 and MW023, were sampled by bailing.	• As PFAS results for groundwater samples from these wells were reported within the historical range for each well, the use of bailing has not impacted the OMP program.
Collection of samples during a single sampling event	• Due to the non-availability of a work safety officer to supervise sampling at airside locations, access to airside locations was delayed by approximately four weeks and was completed on 29 November 2023. • Off-Base sampling locations MW057S and MW057I were not accessible as a landowner had erected an electrical fence across the Council easement where the monitoring wells are located. Sampling of these wells did not take place until after the Council had	• The delay of four weeks in completing sampling is considered to be a relatively short period and is unlikely to impact the OMP program.

SAQP	October / November 2023 Sampling Event	Impact on OMP Program
	arranged for the removal of the fence (29 November 2023).	
Collection and analysis of interlaboratory duplicates at 1:10 primary samples.	• One of the inter-laboratory water duplicate samples (triplicate for MW044) was inadvertently given the same sample identity as the intra-laboratory duplicate (0861_QC108_231024). Consequently, the sample bottles were not provided to NMI for analysis. This meant that the percentage of water triplicates analysed (9.4%) was slightly below the target rate of 10%.	• No impact as the rate is only slightly below the target rate.
Download of data from seven data loggers	• Partial data, up to 31 January 2023 was retrieved from the datalogger in MW056S. The datalogger settings were reset to allow data to be collected in future. MW056S could not be located during the previous two sampling events in October 2022 and in April 2023 so the issue with the settings was not identified and rectified until the well was found during the October / November 2023 sampling event.	• Groundwater level data from MW056S for the period February to October 2023 was not available. This reduces the understanding of groundwater level changes during 2023 at this off-site area adjacent to Warrill Creek.

4.0 Field Observations and Results

The October / November 2023 sampling event was completed between 23 October and 29 November 2023. The results are summarised in following sections.

4.1 Groundwater

4.1.1 Groundwater Observations and Field Measurements

Table 9 Groundwater Observations and Field Measurements

Item	Details
Access	All monitoring wells were accessible except for MW049 which was not found due to heavy vegetation.
Monitoring well network	No issues were identified at 36 monitoring wells. The gatic covers at three locations were damaged, MW042, MW047 and MW050.
Field observations	Groundwater from one monitoring well had a sulfuric odour (MW055S). Groundwater from eight monitoring wells had an organic odour (MW012, MW033, MW037, MW042, MW044, MW047, MW054S, MW056S). No other visible or olfactory indications of contamination were observed during the sampling of the other monitoring wells. Field observations are presented in **Table T1** in **Appendix B**.
Depth to groundwater	In October / November 2023, depth to groundwater in the Alluvium was between 3.21 and 15.12 metres below top of casing (mbtoc). Depth to groundwater in the Tertiary Formation was between 2.63 and 15.86 mbtoc. Depth to groundwater in the Walloon Coal Measures was between 5.667 and 23.919 mbtoc. Groundwater elevation in the Alluvium was between 9.03 and 17.84 metres Australian height datum (mAHD). Groundwater elevation in the Tertiary Formation was between 8.250 and 28.980 mAHD. Groundwater elevation in the Walloon Coal Measures was between 13.839 and 37.517 mAHD. Groundwater gauging data are presented in **Table T1** in **Appendix B**. Water level transducer results for seven monitoring wells are presented in **Appendix G**.
Groundwater flow direction	Inferred groundwater contours and groundwater flow directions at the Base in October 2023 for the Alluvium / Tertiary Formation are shown on **Figure 4** in **Appendix A**. The inferred local groundwater flow direction is towards the northeast, east and southeast in the direction of Bremer River and Warrill Creek. The inferred flow direction is consistent with previous sampling events (AECOM, 2023b). Inferred groundwater contours and groundwater flow directions at the Base in October 2023 for the Walloon Coal Measures are shown on **Figure 5** in **Appendix A**. The inferred local groundwater flow direction is towards the northeast and east in the direction of Bremer River. The inferred flow direction is consistent with previous sampling events (AECOM, 2023b).

<table>
<tr><th>Item</th><th>Details</th></tr>
<tr><td>Groundwater quality parameter field measurements</td><td>Groundwater quality parameters were measured ex situ, using water remaining in the HydraSleeve™ following sampling. The readings are presented in Table T1 in Appendix B and are summarised per geological unit in the table below:
<table>
<tr><th>Unit</th><th>Parameter</th><th>Min.</th><th>Max.</th><th>Comment</th></tr>
<tr><td rowspan="5">Alluvium</td><td>DO (mg/L)</td><td>0.22</td><td>7.98</td><td>Poorly to well oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>521</td><td>7585</td><td>Fresh to brackish</td></tr>
<tr><td>pH</td><td>6.49</td><td>7.83</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>74.9</td><td>408.1</td><td>Mildly to strongly reducing</td></tr>
<tr><td>Temperature (°C)</td><td>19.0</td><td>27.2</td><td>-</td></tr>
<tr><td rowspan="5">Tertiary Formation</td><td>DO (mg/L)</td><td>0.95</td><td>3.19</td><td>Poorly to mildly oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>597</td><td>23941</td><td>Fresh to saline</td></tr>
<tr><td>pH</td><td>6.45</td><td>7.47</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>129.8</td><td>333.2</td><td>Moderately reducing</td></tr>
<tr><td>Temperature (°C)</td><td>21.6</td><td>26.4</td><td>-</td></tr>
<tr><td rowspan="5">Walloon Coal Measures</td><td>DO (mg/L)</td><td>0.57</td><td>3.22</td><td>Poorly to mildly oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>875</td><td>22852</td><td>Fresh to saline</td></tr>
<tr><td>pH</td><td>6.47</td><td>7.31</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>81.1</td><td>378</td><td>Mildly to strongly reducing</td></tr>
<tr><td>Temperature (°C)</td><td>22.9</td><td>27.9</td><td>-</td></tr>
</table>
The measured parameter ranges are consistent with previous sampling event results (AECOM 2023b).</td></tr>
<tr><td>Weather conditions</td><td>Weather conditions during groundwater sampling were hot, dry and sunny with maximum daily temperatures between 24.8 and 36.0°C. A total of 5.4 mm of rainfall was recorded during the sampling period between 23 and 30 October 2023 [Bureau of Meteorology (BoM) station 040004 – ‘Amberley’]. Weather conditions on 29 November 2023 were wet with 42.2 mm rainfall recorded. A total of 187 mm rainfall was recorded between 1 and 29 November 2023.</td></tr>
<tr><td>Estate management works or training activities</td><td>Since the previous sampling event in April 2023, remediation works relating to one of the main source areas, the sewage treatment plant, has been ongoing. The remediation works involved excavation of soil and stockpiling within an area adjacent to the southern portion of the Base, near MW032 and Warrill Creek.</td></tr>
</table>

4.1.2 Groundwater Analytical Results

The groundwater analytical results for PFAS from the sampling event are presented in **Table T2** in **Appendix B**. There was no new exceedances of guideline values or first-time detections of PFAS compared to the historical dataset.

Concentrations of sum of PFOS and PFHxS in 21 of the 39 groundwater samples exceeded the NEMP (HEPA, 2020) drinking water guideline value with eight groundwater samples exceeding the NEMP (HEPA, 2020) PFOA drinking water guideline value[1].

PFOS were detected above the LOR in 27 of the 39 groundwater samples collected and all these samples exceeded the NEMP (HEPA, 2020) ecological guideline value for PFOS for 99% protection of ecosystems with 18 of these samples also exceeding the 95% protection guideline value. None of the groundwater samples exceeded the NEMP (HEPA, 2020) PFOA ecological guideline values for 99% and 95% protection of freshwater species.

There were four new maximum sum of PFOS and PFHxS concentrations recorded during the sampling event in groundwater samples from MW020 (146 µg/L), MW021 (191 µg/L), MW055S (2.4 µg/L). There were five new maximum PFOS concentrations recorded in the samples from MW020 (97.7 µg/L),

[1] The number of exceedances identified only includes the primary samples. Quality assurance samples have not been included.

MW021 (148 µg/L), MW025 (1.09 µg/L), MW030 (0.41 µg/L) and MW055S (1.01 µg/L). There were four new maximum PFOA concentrations recorded in the samples from MW020 (6.16 µg/L), MW021 (4.72 µg/L), MW030 (1.41 µg/L) and MW055S (0.08 µg/L).

4.2 Surface Water

4.2.1 Surface Water Observations and Field Measurements

Table 10 Surface Water Observations and Field Measurements

<table>
<tr><th>Item</th><th>Details</th></tr>
<tr><td>Access</td><td>All surface water sampling locations were accessed during the sampling event. Three locations were dry (SW041, SW052 and SW091) and surface water samples could not be collected.</td></tr>
<tr><td>Field observations</td><td>A slight sheen or biosheen was observed at 10 sampling locations SW002, SW011, SW025, SW026, SW028, SW034, SW045, SW049, SW089 and SW094. Organic odours were observed at 18 locations (SW008, SW009, SW015, SW016, SW025, SW026, SW036, SW037, SW039, SW056, SW076, SW079, SW088, SW089, SW090, SW094, SW098 and SW100). A sulfuric odour was also recorded at SW008.

A hydrocarbon odour and oil sheen were observed at sampling location SW030, a drain location. No other visual or olfactory indications of contamination were observed during the sampling of the other surface water sampling locations. Field observations are reported in Table T3, Appendix B.</td></tr>
<tr><td>Surface water quality parameter field measurements</td><td>Surface water quality parameters were measured prior to collecting surface water samples. The readings are presented in Table T3 in Appendix B and are summarised below:
<table>
<tr><th>Unit</th><th>Parameter</th><th>Min.</th><th>Max.</th><th>Comment</th></tr>
<tr><td>Drain</td><td>DO (mg/L)</td><td>1.51</td><td>9.97</td><td>Poorly to well oxygenated</td></tr>
<tr><td></td><td>EC (µS/cm)</td><td>145.3</td><td>1824</td><td>Fresh</td></tr>
<tr><td></td><td>pH</td><td>6.06</td><td>10.61</td><td>Near neutral to alkaline</td></tr>
<tr><td></td><td>ORP (mV)</td><td>187.9</td><td>413.9</td><td>Moderately reducing</td></tr>
<tr><td></td><td>Temperature (°C)</td><td>20.0</td><td>32.9</td><td>-</td></tr>
<tr><td>Warrill Creek</td><td>DO (mg/L)</td><td>2.61</td><td>9.36</td><td>Poorly to well oxygenated</td></tr>
<tr><td></td><td>EC (µS/cm)</td><td>6.5</td><td>1969</td><td>Fresh</td></tr>
<tr><td></td><td>pH</td><td>6.96</td><td>8.42</td><td>Near neutral to slightly alkaline</td></tr>
<tr><td></td><td>ORP (mV)</td><td>264.7</td><td>332.9</td><td>Moderately reducing</td></tr>
<tr><td></td><td>Temperature (°C)</td><td>23.6</td><td>27.8</td><td>-</td></tr>
<tr><td>Bremer River</td><td>DO (mg/L)</td><td>1.84</td><td>6.07</td><td>Poorly to well oxygenated</td></tr>
<tr><td></td><td>EC (µS/cm)</td><td>601</td><td>2195</td><td>Fresh to brackish</td></tr>
<tr><td></td><td>pH</td><td>7.33</td><td>8.42</td><td>Neutral to slightly alkaline</td></tr>
<tr><td></td><td>ORP (mV)</td><td>194.5</td><td>304.1</td><td>Mildly to moderately reducing</td></tr>
<tr><td></td><td>Temperature (°C)</td><td>23.1</td><td>29.9</td><td>-</td></tr>
</table>
The measured parameter ranges are consistent with previous sampling event results (AECOM 2023b).</td></tr>
</table>

Item	Details
Weather Conditions	Weather conditions during surface water sampling were hot, dry and sunny with maximum daily temperatures between 24.8 and 36.0°C. A total of 0.4 mm of rainfall was recorded during the sampling period between 23 and 27 October 2023 (BoM station 040004 – 'Amberley'). Weather conditions on 29 November 2023 were wet with 42.2 mm rainfall recorded. A total of 187 mm rainfall was recorded between 1 and 29 November 2023.
Estate Management Works or Training Activities	Since the previous sampling event in April 2023, remediation works relating to one of the main source areas, the sewage treatment plant, has been ongoing. The remediation works involved excavation of soil and stockpiling within an area adjacent to the southern portion of the Base, near MW032 and Warrill Creek.

4.2.2 Surface Water Analytical Results

The analytical results for PFAS in surface water from this sampling event are presented in **Table T4** in **Appendix B**. There were no first-time detections. There was one new exceedances of sum of PFOS and PFHxS, which was in the sample from SW028 (2.22 µg/L) which exceeded the recreational water guideline value. SW028 is located at an on-Base drainage location which discharges into Warrill Creek. The location of SW028 is shown on **Figure 6**, **Appendix A**. There were no new exceedances of PFOA in surface water samples.

Concentrations of sum of PFOS and PFHxS in 11 of the 46 surface water samples exceeded the NEMP (HEPA, 2020) recreational water guideline value with none of the samples exceeding the PFOA guideline value.

A total of 38 of 46 samples exceeded the NEMP (HEPA, 2020) ecological guideline for PFOS for 99% protection of ecosystems with 24 of these samples also exceeding the 95% protection guideline value. None of the samples exceeded the NEMP (HEPA, 2020) PFOA ecological guideline values for either 95% or 99% protection of freshwater species.

New maximum concentrations for either sum of PFOS and PFHxS, PFOS or PFOA were recorded in the surface water samples from SW028 (2.22 µg/L sum of PFHxS and PFOS, 0.94 µg/L PFOS and 0.05 µg/L PFOA) and SW056 (7.77 µg/L sum of PFHxS and PFOS, 4.43 µg/L PFOS and 0.48 µg/L PFOA).

4.3 Sediment

4.3.1 Sediment Observations and Field Measurements

Table 11 Sediment Observations

Item	Details
Access	All sediment sample locations were accessible.
Field Observations	Sediment logging data are presented in **Table T5** in **Appendix B**. 24 of the 49 samples had an organic odour. No visible indications of contamination were observed during sediment sampling.
Weather Conditions	Weather conditions during sediment sampling were hot, dry and sunny with maximum daily temperatures between 24.8 and 36.0°C. A total of 5.4 mm of rainfall was recorded during the sampling period between 23 and 30 October 2023 (BoM station 040004 – 'Amberley'). Weather conditions on 29 November 2023 were wet with 42.2 mm rainfall recorded. A total of 187 mm rainfall was recorded between 1 and 29 November 2023.

Item	Details
Estate Management Works or Training Activities	Since the previous sampling event in April 2023, remediation works relating to one of the main source areas, the sewage treatment plant, has been ongoing. The remediation works involved excavation of soil and stockpiling within an area adjacent to the southern portion of the Base, near MW032 and Warrill Creek.

4.3.2 Sediment Analytical Results

The analytical results for PFAS in sediment from this sampling event are presented in **Table T6** in **Appendix B**. There were no first-time detections in the historical dataset. New maximum sum of PFOS and PFHxS concentrations were recorded at SD040 (0.0134 mg/kg), SD045 (0.009 mg/kg), SD076 (0.476 mg/kg). New maximum concentrations of PFOA were recorded at SD076 (0.0067 mg/kg). New maximum concentrations of PFOS were recorded at SD037 (1.06 mg/kg), SD040 (0.013 mg/kg), SD045 (0.009 mg/kg) and SD076 (0.428 mg/kg).

5.0 Summary and Next Sampling Event

5.1 Summary of Sampling Event

A groundwater, surface water and sediment sampling event was completed within the RAAF Base Amberley Management Area on selected days between 23 October and 29 November 2023. The program included sampling of groundwater from 40 monitoring wells and 49 co-located surface water and sediment sampling locations. In total, 39 groundwater samples, 46 surface water samples and 48 sediment samples were analysed.

Table 12 summarises the findings of the October / November 2023 sampling event and the recommended actions.

Table 12 Summary of Sampling Event

Item	Comment	Recommended Actions
Access to sampling locations	All groundwater sampling locations were accessible except for MW049 due to the presence of heavy vegetation. All surface water and sediment samples were collected except for surface water samples from SW041, SW052 and SW091 as these locations were dry at the time of sampling.	The location of MW049 is heavily vegetated and the area would need to be mown to expose the monitoring well cover. Surface water sampling locations SW041, SW052 and SW091 should be reinspected during the next sampling event in April 2024. Sampling of on-Base drains should continue to be timed to occur after a rainfall event.
Groundwater level loggers	Data from seven groundwater level loggers were retrieved and data downloaded. Partial data (up to 31 January 2023) was retrieved from the datalogger installed in MW056S. The datalogger was reset and reinstalled in the well.	Ongoing monitoring in accordance with the OMP.
Monitoring well network condition	No issues were identified in 36 of the 39 monitoring wells sampled. The gatic covers for MW042, MW047 and MW050 have been damaged.	The gatic covers for MW042, MW047 and MW050 require repair.
Analytical results	Sum of PFOS and PFHxS or PFOA concentrations in all 39 groundwater samples were consistent with historical results. Five groundwater sampling locations reported new maximum concentrations or either sum of PFOS and PFHxS or PFOA. Sum of PFOS and PFHxS or PFOA concentrations in 45 of the 46 surface water samples collected were consistent with historical results. Two surface water sampling locations reported new maximum concentrations. Sum of PFOS and PFHxS or PFOA concentrations were consistent with	Ongoing monitoring in accordance with the OMP.

Item	Comment	Recommended Actions
	historical results in all 48 sediment samples. Four sediment samples reported new maximum concentrations for sum of PFOS and PFHxS or PFOA.	
First-time detections of sum of PFOS and PFHxS or PFOA	No first-time detections of sum of PFOS and PFHxS or PFOA above the laboratory LOR were recorded in any of the groundwater, surface water or sediment samples collected.	Ongoing monitoring in accordance with the OMP.
New exceedance of NEMP (HEPA, 2020) guideline values	There was one new exceedance of the NEMP (HEPA, 2020) recreational water guideline value for sum of PFHxS and PFOS in the surface water collected from SW028, an on-Base drainage location. The concentration (2.2 µg/L) marginally exceeded the guideline value.	Ongoing monitoring in accordance with the OMP.

5.2 Upcoming Sampling Events

The next biannual sampling event is scheduled for April 2024.

5.3 Upcoming Interpretive Report

The next Ongoing Monitoring Report (OMR) is scheduled for Q3 2024.

6.0 References

AECOM, 2023a. *PFAS OMP- RAAF Base Amberley Sampling and Analysis Quality Plan*, Final Rev 7, March 2023.

AECOM, 2023b – in draft, *Ongoing Monitoring Report, March 2021 to May 2023 – PFAS OMP – RAAF Base Amberley,* Rev 1 Draft, November 2023.

ASC NEPM, 2013a. *Schedule B2. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B2 Guideline on Site Characterisation*.

ASC NEPM, 2013b. *Schedule B4. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B4 Guideline on Site-Specific Health Risk Assessment Methodology*.

ASC NEPM, 2013c. *Schedule B7. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B7 Guideline on Derivation of Health-Based Investigation Levels*.

Australian and New Zealand Governments and Australian state and territory governments. 2018. *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.*

CH2M Hill, 2018. *RAAF Base Amberley PFAS Investigation – Detailed Site Investigation*, Final, Rev6, November 2018.

CH2M Hill, 2019c, *RAAF Base Amberley PFAS Seasonal Monitoring Event Report*, Rev0, July 2019.

Department of Defence, 2018. *Routine Environment Water Quality Monitoring Manual*.

Department of Defence, July 2018, amended June 2021, *Defence Contamination Management Manual.*

Department of Defence, 2020. *PFAS Area Management Plan- RAAF Base Amberley, Queensland,* September 2020.

Department of Defence, 2021. *PFAS OMP Factual Reports Guidance*, May 2021, Rev 0.2.

Department of Health, 2019. *Health Based Guidance Values for PFAS for use in site investigations in Australia.* 2017, as updated in 2019.

Heads of EPAs Australia and New Zealand (HEPA) 2020. *PFAS National Environmental Management Plan*, V2.0. January 2020.

National Health and Medical Research Council (NHMRC), 2019. *Guidance on PFAS in Recreational Water.* August 2019.

United States Environmental Protection Agency, 2006. *Guidance on Systematic Planning Using the Data Quality Objectives Process*, EPA QA/G-4: EPA/240/B-06/001.

Appendix A

Figures

Appendix A Figures

Figure 1 RAAF Base Amberley Location

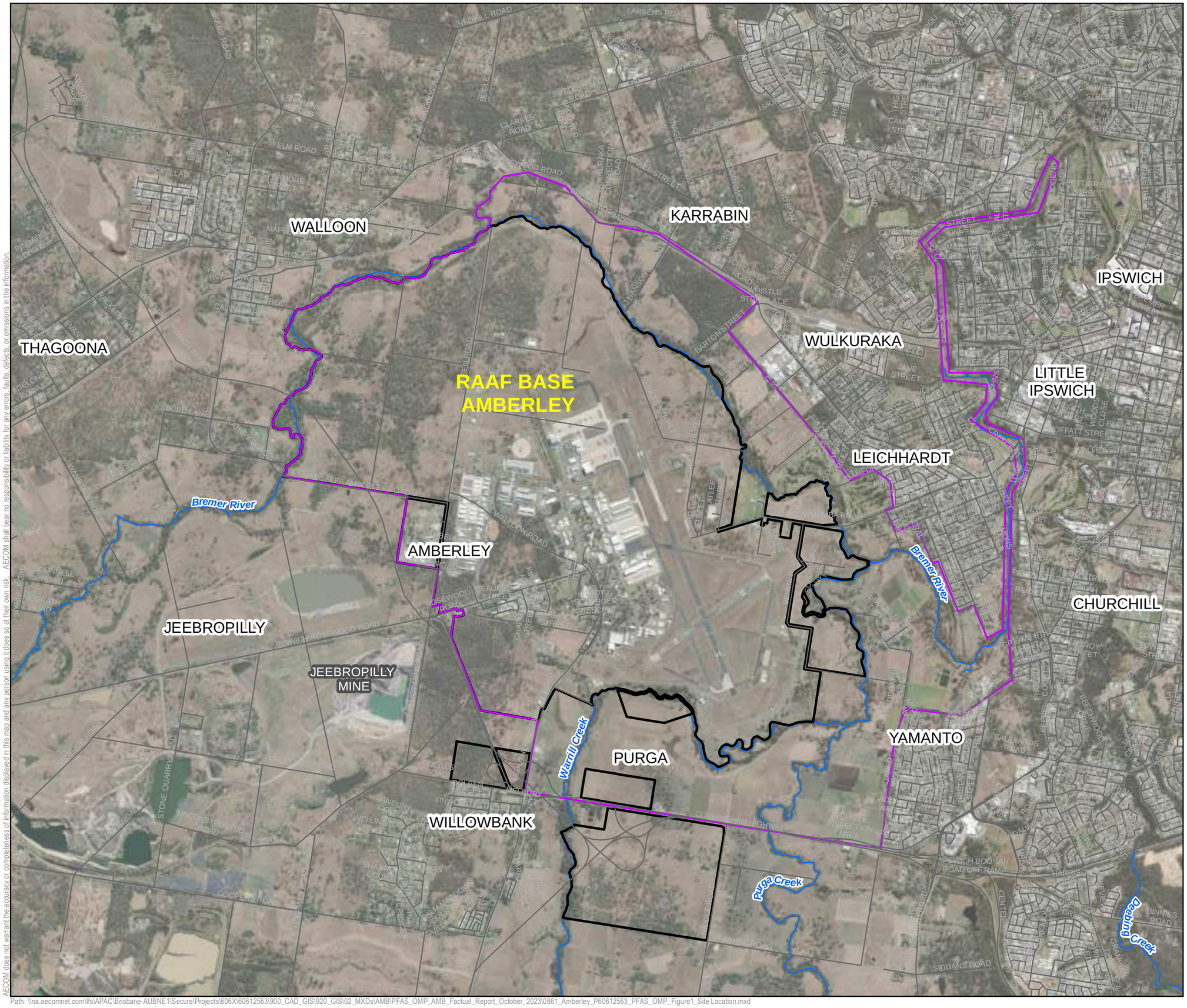
Figure 2 Groundwater Monitoring Wells

Figure 3 Surface Water and Sediment Sampling Locations

Figure 4 Inferred Groundwater Contours in the Alluvium / Tertiary Formation – October 2023

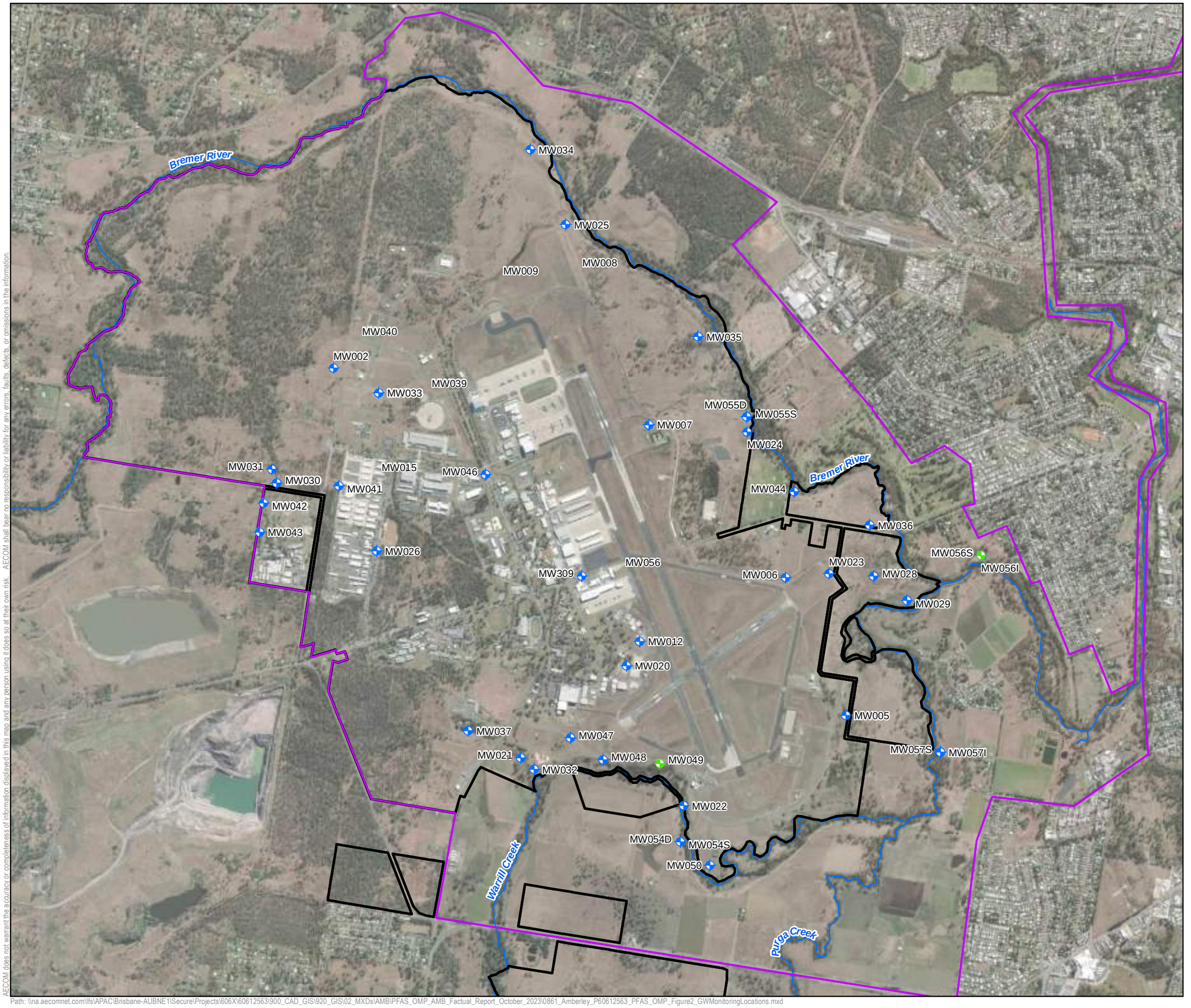
Figure 5 Inferred Groundwater Contours in the Walloon Coal Measures – October 2023

Figure 6 Surface Water Results – Deviations from Historical Data – October / November 2023



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LEGEND

- Groundwater Monitoring Well (sampled)
- Groundwater Monitoring Well (not sampled)
- Management Area
- Base Boundary
- Watercourses

N

0 0.5 1 km

AECOM

SCALE 1:26,000

SIZE A3

SHEET -

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 2: Groundwater Monitoring Wells

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY
SAMPLING EVENT,
FACTUAL REPORT: OCTOBER / NOVEMBER 2023

CLIENT

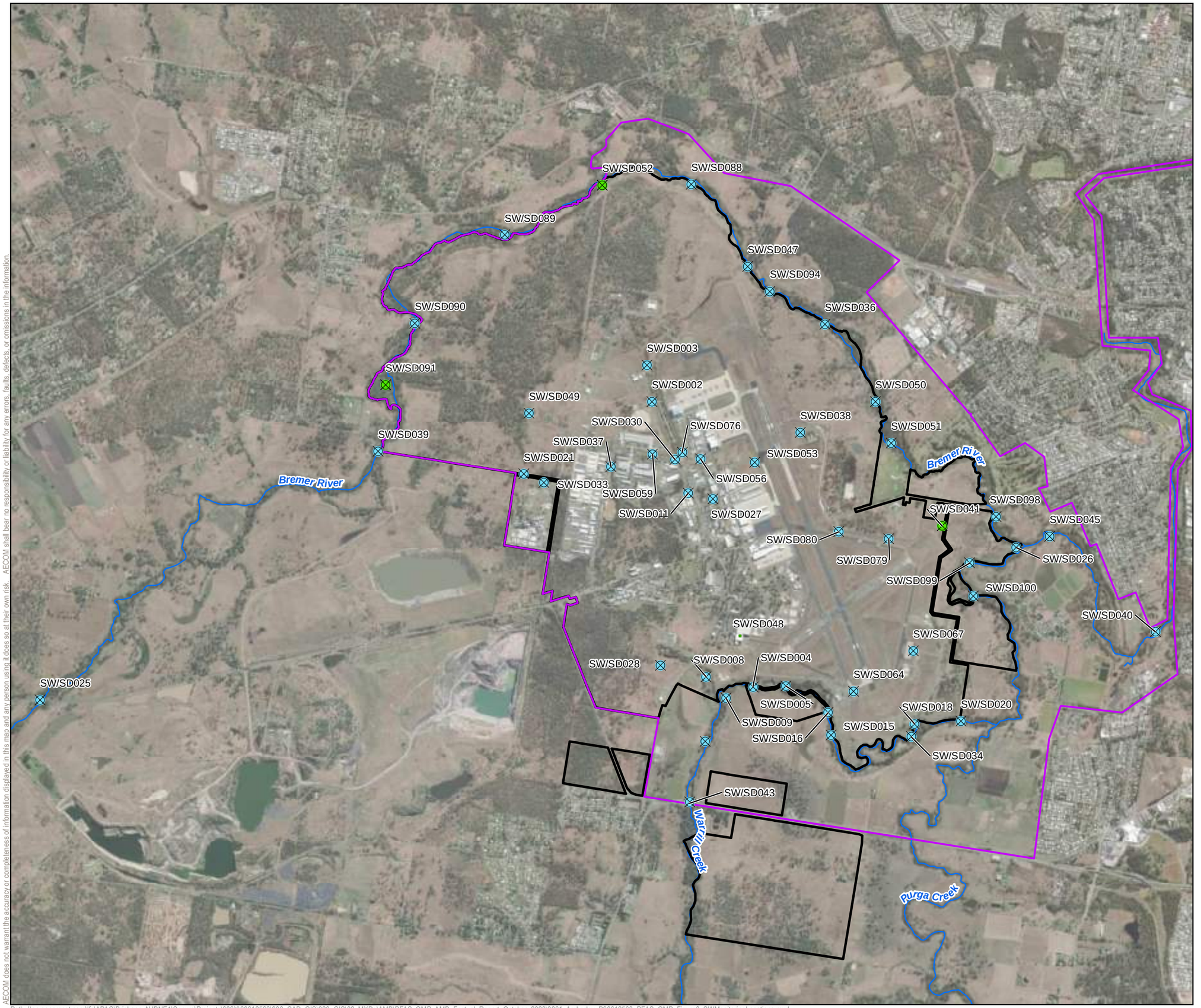
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LEGEND

- Surface water and sediment sample collected
- Sediment sampled collected, surface water sample not collected
- Management Area
- Base Boundary
- Watercourses

km
0 0.5 1

AECOM

SCALE 1:35,000
SIZE A3
SHEET
COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE
Figure 3: Surface Water and Sediment Sampling Locations

PROJECT
PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT, FACTUAL REPORT: OCTOBER / NOVEMBER 2023

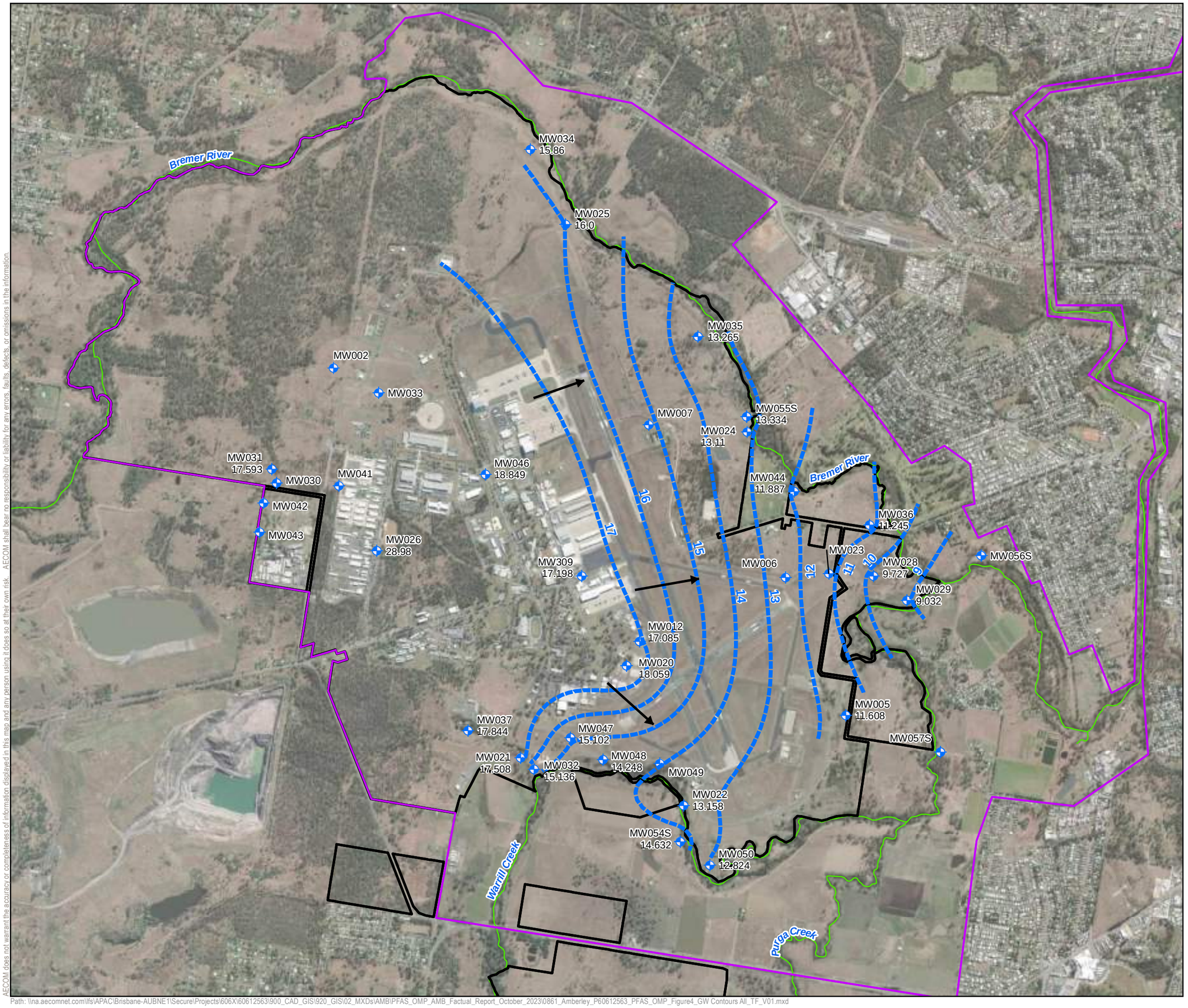
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LEGEND

- Groundwater Monitoring Wells
- Management Area
- Base Boundary
- Inferred Groundwater Contour (mAHD)
- Groundwater flow direction

AECOM

SCALE	SIZE
1:26,000	A3
SHEET	COORDINATE SYSTEM
-	GDA 1994 MGA Zone 56

TITLE

Figure 4: Inferred Groundwater Contours in the Alluvium / Tertiary Formation - October 2023

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT. FACTUAL REPORT: OCTOBER / NOVEMBER 2023

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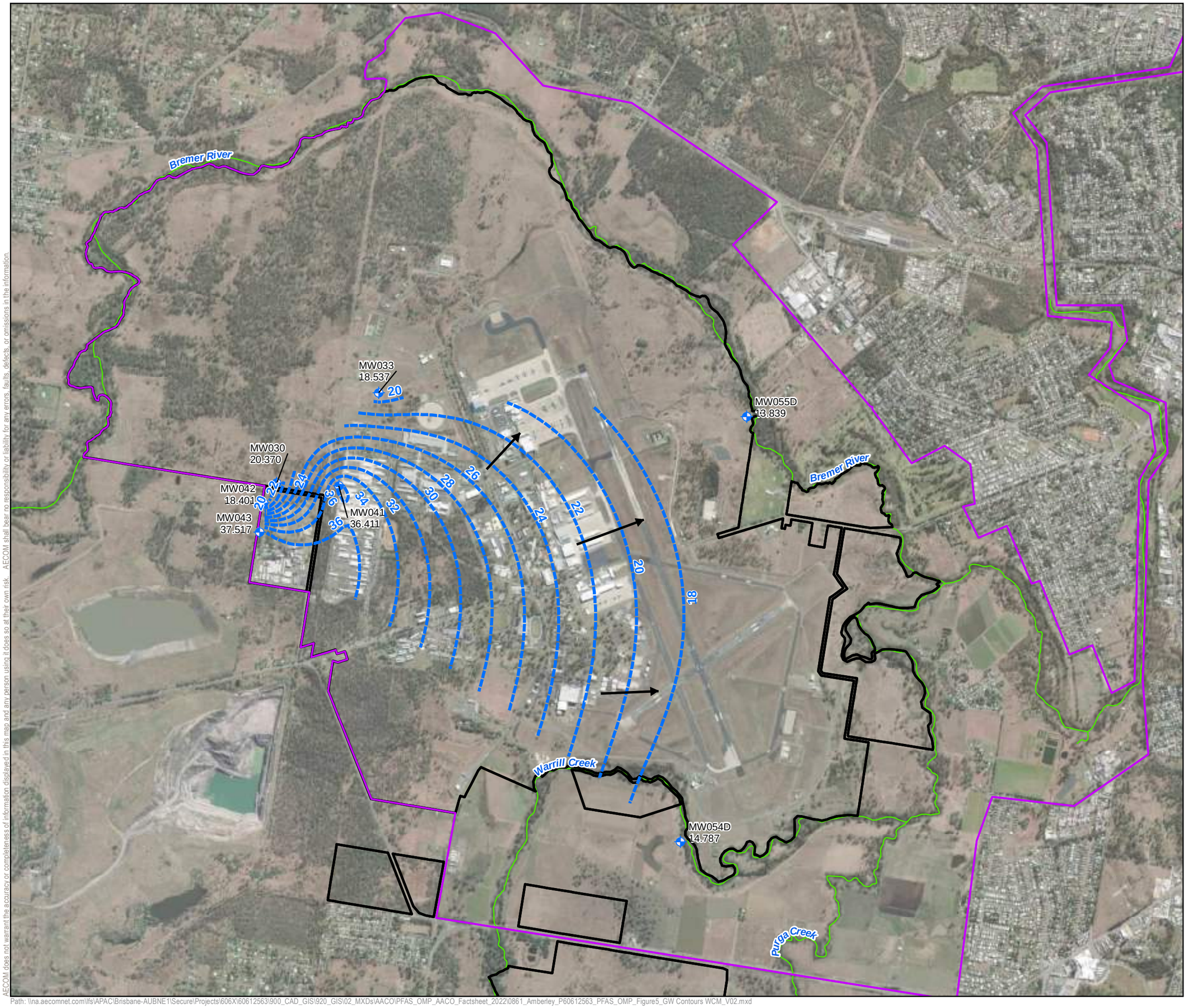
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LEGEND

- Management Area
- Base Boundary
- Groundwater Contours (mAHD)
- Groundwater flow direction

0 0.5 1 km

AECOM

SCALE 1:26,000

SIZE A3

SHEET -

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 5: Inferred Groundwater Contours in the Walloon Coal Measures - October 2023

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY
SAMPLING EVENT,
FACTUAL REPORT: OCTOBER / NOVEMBER 2023

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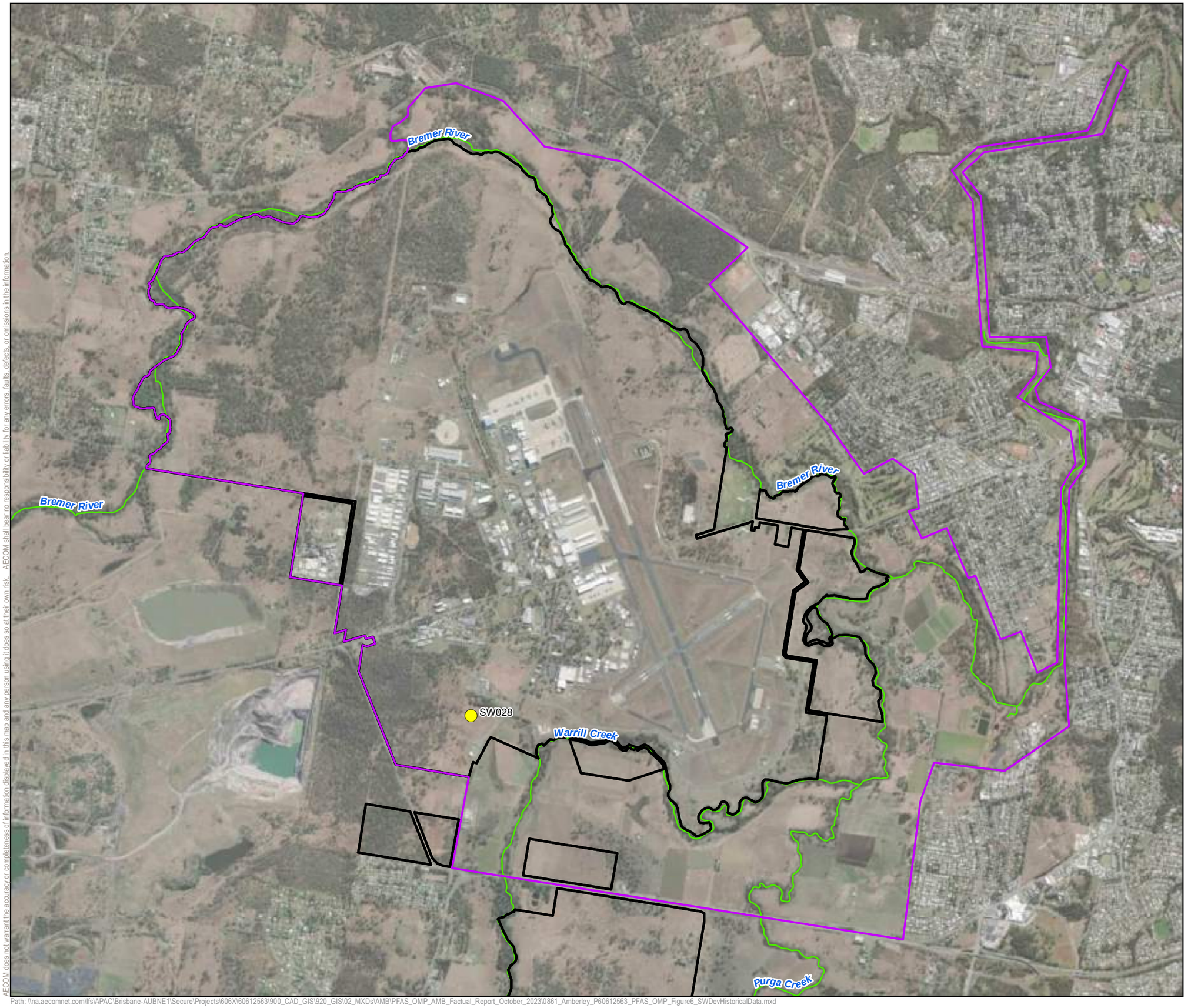
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LEGEND

- Management Area
- Base Boundary
- Watercourses
- First-time exceedance of PFHxS+PFOS or PFOA

0 0.5 1 km

AECOM

SCALE 1:30,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 6: Surface Water Results - Deviations from Historical Data - October / November 2023

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY
SAMPLING EVENT,
FACTUAL REPORT: OCTOBER / NOVEMBER 2023

CLIENT

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Appendix B

Tables

Appendix B Tables

Table T1 Groundwater Gauging and Field Parameter Results
Table T2 Groundwater PFAS Analytical Results
Table T3 Surface Water Field Parameter Results
Table T4 Surface Water PFAS Analytical Results
Table T5 Sediment Sampling Observations
Table T6 Sediment PFAS Analytical Results

Property ID	Well ID	Screen depth (m)	Hydrasleeve™ Install Date	Approximate Hydrasleeve™ Installation Depth (mbtoc)	Hydrasleeve™ Sample Date	Hydrasleeve™ Redeployed Post-Sampling?	Aquifer	Well Depth (mbtoc)	Depth to Water (mbtoc)	TOC Elevation (mAHD)	Groundwater Elevation (mAHD)	Condition of Well	DO (mg/L)	EC (µS/cm)	pH	Er (mV)	Eh (mV)	Temp (°C)	Water Colour	Odour	Sheen	Sample Method / Comments
0861	MW002	16.7-23.7	26/10/2022	22.50	23/10/2023	Yes	Walloon Coal Measures	24.152	17.245	Unknown	Unknown	Good	1.46	13476	6.47	15.2	220.2	25.6	Cloudy/Milky, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW005	13.0-17.0	08/09/2023	16.00	27/10/2023	No	Alluvium	17.804	15.117	26.725	11.608	Good	0.98	2247	6.71	-52.4	152.6	20.7	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW012	12.5-17.5	08/09/2023	15.00	27/10/2023	No	Tertiary Formation	16.098	9.09	26.175	17.085	Good	1.77	13104	6.65	-75.2	129.8	22.3	Clear, non-turbid	Organic odour	No sheen	HydraSleeve™
0861	MW020	23.5-16.5	08/09/2023	15.00	27/10/2023	No	Tertiary Formation	15.335	8.984	27.043	18.059	Good	3.19	3231	7.47	27.1	232.1	23.9	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW021	2.5-6.0	08/09/2023	4.50	27/10/2023	No	Alluvium	5.73	3.212	20.72	17.508	Good	2.8	995	7.45	115.2	320.2	20	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW022	4.0-9.0	08/09/2023	8.00	25/10/2023	No	Alluvium	9.79	6.492	19.65	13.158	Good	0.92	1391	6.54	50.6	255.6	22.4	Orange/Yellow, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW024	7.0-11.0	08/09/2023	10.50	24/10/2023	No	Alluvium	11.91	7.84	20.95	13.11	Good	0.92	3790	7.07	68	273	21.6	Clear, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW025	7.4-11.4	08/09/2023	8.00	27/10/2023	No	Alluvium	12.215	9.42	25.42	16	Good	3.92	1276	7.41	68.4	273.4	22.2	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW026	14.5-17.5	08/09/2023	16.00	27/10/2023	No	Tertiary Formation	17.345	11.26	40.24	28.98	Good	1.48	23941	6.54	-22.7	182.3	22.2	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW028	10.5-14.5	08/09/2023	12.50	25/10/2023	No	Alluvium	13.93	11.103	20.83	9.727	Good	2.02	6741	7.03	68.9	273.9	23.1	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW029	7.0-10.0	08/09/2023	9.00	25/10/2023	No	Alluvium	10.875	9.198	18.23	9.032	Good	1.68	5279	6.96	116.8	321.8	22.9	Light orange, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW030	17.0-21.0	08/09/2023	19.00	23/10/2023	No	Walloon Coal Measures	21.805	15.47	35.84	20.37	Good	0.57	22852	6.6	173	378	27.9	Clear, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW309	13.0-19.0	08/09/2023	18.00	27/10/2023	Yes	Tertiary Formation	19.296	11.409	28.607	17.198	Good	2.49	10415	6.79	71.2	276.2	21.6	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW031	14.5-20.5	08/09/2023	17.00	23/10/2023	No	Tertiary Formation	18.102	15.857	33.45	17.593	Good	1.48	15056	6.61	21.8	226.8	25.8	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW032	8.0-14.0	08/09/2023	13.00	27/10/2023	No	Alluvium	14.64	11.144	26.28	15.136	Good	2.13	3119	6.97	119	324	19	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW033	29.0-33.0	08/09/2023	32.00	27/10/2023	No	Walloon Coal Measures	34.287	23.919	42.456	18.537	Good	0.74	14434	6.62	-123.9	81.1	24.1	Light grey, low turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW034	5.0-10.0	08/09/2023	8.00	23/10/2023	No	Alluvium	11.501	8.445	24.305	15.86	Good	1.37	1221	7.24	-130.1	74.9	27.2	Light grey, moderate turbidity	No odour	No sheen	HydraSleeve™
0861	MW035	8.0-13.5	08/09/2023	12.50	24/10/2023	No	Alluvium	14.505	11.734	24.999	13.265	Good	0.82	3043	6.51	104.2	309.2	23.7	Clear, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW036	10.2-15.2	08/09/2023	14.00	24/10/2023	No	Alluvium	14.785	12.795	24.04	11.245	Good	7.98	2080	7.69	203.1	408.1	22.5	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW037	5.0-10.0	08/09/2023	9.00	23/10/2023	No	Alluvium	10.96	7.375	25.219	17.844	Good	0.22	7585	6.67	-94.9	110.1	21.6	Clear, non-turbid	Organic odour	No sheen	HydraSleeve™
0861	MW041	11.5-14.5	19/04/2023	13.00	30/10/2023	Yes	Walloon Coal Measures	14.438	9.972	46.383	36.411	Good	3.22	6109	6.75	54.4	259.4	23	Light brown, moderately turbid	No odour	No sheen	HydraSleeve™
0861	MW042	24.0-30.0	27/04/2023	28.00	30/10/2023	Yes	Walloon Coal Measures	29.045	21.635	40.036	18.401	Damaged	1.27	17476	7	-66.9	138.1	24	Light grey, moderate turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW043	18.0-21.0	27/04/2023	19.50	30/10/2023	Yes	Walloon Coal Measures	20.627	11.665	49.182	37.517	Good	1.9	5335	6.74	-33.4	171.6	24.8	Light brown, moderately turbid	No odour	No sheen	HydraSleeve™
0861	MW044	8.0-11.0	11/05/2023	9.00	24/10/2023	Yes	Alluvium	11.138	8.424	20.311	11.887	Good	1.58	2454	6.85	-97.7	107.3	22.3	Light brown, low turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW046	8.2-11.2	17/04/2023	10.00	27/10/2023	Yes	Tertiary Formation	11.038	7.152	26.001	18.849	Good	0.95	1471	7.14	19.6	224.6	23.8	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW047	10.5-13.5	20/04/2023	12.00	26/10/2023	Yes	Tertiary Formation	13.203	11.163	26.265	15.102	Damaged	0.98	6478	6.45	-55.5	149.5	25.4	Clear, low turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW048	7.5-10.5	17/04/2023	9.50	26/10/2023	Yes	Alluvium	10.238	8.86	23.108	14.248	Good	2.22	899.2	6.49	163.8	368.8	22.5	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW050	11.5-14.5	17/04/2023	13.30	27/10/2023	Yes	Alluvium	14.424	11.493	24.317	12.824	Damaged	1.16	521.4	7.15	-77.8	127.2	21.3	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW054D	18.0-21.0	26/04/2023	20.00	26/10/2023	Yes	Walloon Coal Measures	20.952	5.667	20.454	14.787	Good	1.3	875	6.97	-71.6	133.4	22.9	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW054S	4.0-7.0	26/04/2023	6.00	26/10/2023	Yes	Alluvium	6.895	5.748	20.38	14.632	Good	1.34	3745	6.74	9.5	214.5	23.4	Creamy, moderate to high turbidit	Organic odour	No sheen	HydraSleeve™
0861	MW055D	28.0-34.0	11/05/2023	32.50	24/10/2023	Yes	Walloon Coal Measures	33.83	8.357	22.196	13.839	Good	2.04	7180	7.31	-87.9	117.1	23.8	Clear, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW055S	9.0-12.0	11/05/2023	10.00	24/10/2023	Yes	Alluvium	11.586	8.806	22.14	13.334	Good	1.3	4015	6.7	-82	123	24.5	Yellowish, moderate turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW056S	6.5-9.5	29/03/2022	8.50	26/10/2023	Yes	Alluvium	9.445	6.852	23.14	16.288	Good	1.83	6382	6.65	32.7	237.7	24.6	Clear, high turbidity	Organic odour	No sheen	HydraSleeveTM
0861	MW056I	15.0-18.0	18/04/2023	17	26/10/2023	Yes	Tertiary Formation	17.745	6.508	14.762	8.254	Good	1.56	597	7.02	22.6	227.6	26.4	Light brown, low turbidity	No odour	No sheen	HydraSleeve™

Notes
All Hydrasleeves™ were installed a minimum of 24 hours prior to sampling.
m - metres
mbtoc - metres below top of casing
mAHD - metres above Australian Height Datum
TOC - Top of Casing
DO - Dissolved Oxygen
EC - Electrical Conductivity
Er - Uncorrected Oxidation Reduction Potential
Eh - Corrected Oxidation Reduction Potential
` - no data
Er converted to Eh by adding 205 based on a YSI with Ag/AgCl sensor calibrated to a 3.5 molar KCL solution
mg/L - milligrams per litre
µS/cm - microsiemens per centimetre
mV - millivolts
°C - degrees Celsius

		Sum of PFHxS and PFOS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	EtFOSAA	MeFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.1	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.05	0.05	0.05	0.05	0.01
PFAS NEMP (HEPA, 2020) Drinking Water		**0.07**											**0.56**																		
PFAS NEMP (HEPA, 2020) Freshwater 99%							*0.13*						*220*																		
PFAS NEMP (HEPA, 2020) Freshwater 95%							0.00023						19																		

Field ID	Location ID	Sampled Date	Lab ID	Type																													
0861_MW002_231023	MW002	23/10/2023	EB2333887001	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW005_231028	MW005	30/10/2023	EB2333894068	Primary	0.04	<0.02	<0.02	0.04	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04
0861_QC111_231028	MW005	28/10/2023	EB2333887037	Duplicate	0.03	<0.02	<0.02	0.03	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03
0861_QC211_231028	MW005	28/10/2023	N23/022977	Triplicate	0.037	<0.01	<0.01	0.037	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04
0861_MW006_231129	MW006	29/11/2023	EB2337879001	Primary	**48.1**	2.62	2.26	13.5	0.43	*34.6*	<0.1	<0.5	1.9	4.62	0.81	**1.21**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.24	0.2	<0.24	<0.24	<0.24	<0.24	<0.1	<0.1	<0.1	0.43	<0.1	<0.1	62.6
0861_MW007_231129	MW007	29/11/2023	EB2337879002	Primary	**21.1**	1.47	1.3	9.51	0.79	*11.6*	<0.02	0.2	0.54	1.96	0.39	**0.84**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.06	0.06	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	0.13	<0.05	<0.05	28.8
0861_MW012_231028	MW012	30/10/2023	EB2333894069	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0681_QC112_231028	MW012	28/10/2023	EB2333894075	Duplicate	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_QC212_231027	MW012	27/10/2023	N23/022984	Triplicate	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0861_MW020_231028	MW020	30/10/2023	EB2333894070	Primary	**146**	4.2	6	48.1	3.39	*97.7*	<0.24	4.9	6.85	11.5	3.86	**6.16**	0.66	<0.24	<0.24	<0.24	<0.24	<0.59	<0.24	<0.59	<0.59	<0.59	<0.59	<0.24	<0.24	<0.24	0.76	<0.24	<0.24	194
0681_QC113_231028	MW020	28/10/2023	EB2333894076	Duplicate	**119**	3.67	4.74	39	2.35	*79.6*	<0.02	2.5	5.19	9.73	3.87	**4.78**	0.59	0.06	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.78	0.07	<0.05	157
0861_QC213_231023	MW020	27/10/2023	N23/022985	Triplicate	**117**	3.5	4.4	37	1.9	*80*	<0.01	1.6	5.4	9	2.7	**4.2**	0.63	0.058	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	0.68	0.079	<0.01	151
0861_MW021_231027	MW021	27/10/2023	EB2333887005	Primary	**191**	2.18	4.25	42.8	2.08	*148*	<0.1	0.5	1.03	4.72	1.1	**4.72**	0.11	<0.1	<0.1	<0.1	<0.1	<0.24	<0.1	<0.24	<0.24	<0.24	<0.24	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	211
0861_MW022_231025	MW022	25/10/2023	EB2333887006	Primary	**10.1**	1.52	1.51	8.06	0.14	*2.03*	<0.02	0.7	0.31	1.3	0.23	0.45	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	16.2
0861_MW023_231129	MW023	29/11/2023	EB2337879003	Primary	**0.59**	0.07	0.06	0.43	<0.02	*0.16*	<0.02	<0.1	<0.02	0.03	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.75
0861_MW024_231024	MW024	24/10/2023	EB2333887007	Primary	0.04	<0.02	<0.02	0.04	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04
0861_MW025_231028	MW025	28/10/2023	EB2333894071	Primary	**2.36**	0.25	0.2	1.27	0.05	*1.09*	<0.02	0.3	0.39	0.47	0.14	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.31
0861_MW026_231027	MW026	27/10/2023	EB2333887009	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW028_231025	MW028	25/10/2023	EB2333887010	Primary	**21.7**	1.38	1.81	9.22	0.97	*12.5*	<0.02	0.3	0.43	1.85	0.32	**0.74**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	29.5
0861_MW029_231025	MW029	25/10/2023	EB2333887011	Primary	**7.51**	0.64	0.77	4.07	0.25	*3.44*	<0.02	0.1	0.16	0.72	0.12	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	10.5
0861_MW030_231023	MW030	23/10/2023	EB2333887012	Primary	**11.7**	3.9	3.79	11.3	0.3	*0.41*	<0.02	0.9	1.44	7.69	1.32	**1.41**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	32.5
0861_MW031_231023	MW031	23/10/2023	EB2333887014	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_QC101_231023	MW031	23/10/2023	EB2333887033	Duplicate	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_QC201_231023	MW031	23/10/2023	N23/022975	Triplicate	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0861_MW032_231027	MW032	27/10/2023	EB2333887015	Primary	**29.9**	1.66	1.72	9.01	0.75	*20.9*	<0.02	0.6	0.77	3.44	0.78	**2.02**	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	41.7
0861_MW033_231027	MW033	27/10/2023	EB2333887016	Primary	0.02	<0.02	<0.02	<0.01	<0.02	0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02
0861_MW034_231023	MW034	23/10/2023	EB2333887017	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW035_231024	MW035	24/10/2023	EB2333887018	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW036_231024	MW036	24/10/2023	EB2333887019	Primary	0.03	<0.02	<0.02	0.03	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03
0861_QC107_231023	MW036	23/10/2023	EB2333887035	Duplicate	0.01	<0.02	<0.02	<0.01	<0.02	0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01
0861_QC207_231023	MW036	23/10/2023	N23/022976	Triplicate	0.02	<0.01	<0.01	0.02	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
0861_MW037_231023	MW037	23/10/2023	EB2333887020	Primary	**5.94**	2.32	2.2	5.33	0.05	*0.61*	<0.02	0.2	0.35	1.68	0.18	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	13
0861_QC100_231023	MW037	23/10/2023	EB2333887031	Duplicate	**6.9**	2.38	2.29	6.4	0.06	*0.5*	<0.02	0.6	0.36	1.76	0.22	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	14.7
0861_QC200_231023	MW037	23/10/2023	N23/022974	Triplicate	**6.73**	2.1	1.5	6.4	0.037	*0.33*	<0.01	0.35	0.41	2	0.21	0.084	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	13.4
0861_MW041_231030	MW041	30/10/2023	EB2333887021	Primary	**0.26**	0.58	0.13	0.13	<0.02	*0.13*	<0.02	0.3	0.62	0.54	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.43
0861_MW042_231030	MW042	30/10/2023	EB2333887022	Primary	0.03	<0.02	<0.02	0.01	<0.02	0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03
0861_MW043_231030	MW043	30/10/2023	EB2333887023	Primary	**0.1**	0.05	<0.02	0.04	<0.02	0.06	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15
0861_MW044_231024	MW044	24/10/2023	EB2333887024	Primary	<0.02	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_QC108_231024	MW044	24/10/2023	EB2333887068	Duplicate	0.02	<0.02	<0.02	0.02	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02
0861_MW046_231027	MW046	31/10/2023	EB2333887025	Primary	**247**	7.25	7.52	52.4	6.28	*195*	<0.25	9.6	20.4	27	5.88	**14.2**	0.5	<0.25	<0.25	<0.25	<0.25	<0.62	<0.25	<0.62	<0.62	<0.62	<0.62	<0.25	<0.25	<0.25	24.1	2.55	<0.25	373
0861_MW047_231026	MW047	26/10/2023	EB2333887026	Primary	**1.1**	<0.07	0.05	0.42	0.03	*0.68*	<0.02	<0.1	<0.02	0.03	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.21
0861_QC110_231026	MW047	26/10/2023	EB2333887072	Duplicate	**1.35**	0.06	0.05	0.51	0.04	*0.84*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.5
0861_QC210_231026	MW047	26/10/2023	N23/022979	Triplicate	**1.38**	0.048	0.046	0.57	0.03	*0.81*	<0.01	<0.05	<0.02	0.032	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.54
0861_MW048_231026	MW048	26/10/2023	EB2333887027	Primary	**9.05**	0.48	0.5	3.43	0.16	*5.62*	<0.02	<0.1	0.14	0.52	0.08	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.1
0861_QC109_231026	MW048	26/10/2023	EB2333887070	Duplicate	**10**	0.44	0.53	3.53	0.19	*6.52*	<0.02	0.1	0.15	0.49	0.08	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.1
0861_QC209_231026	MW048	26/10/2023	N23/022978	Triplicate	**7.5**	0.43	0.37	2.7	0.12	*4.8*	<0.01	0.13	0.14	0.46	0.063	0.11	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	9.32
0861_MW050_231028	MW050	28/10/2023	EB2333894072	Primary	**0.32**	0.04	<0.02	0.1	<0.02	*0.22*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.36
0861_MW054D_231026	MW054D	26/10/2023	EB2333895002	Primary	0.04	<0.02	<0.02	0.02	<0.02	0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04
0861_MW054S_231026	MW054S	26/10/2023	EB2333895001	Primary	**0.27**	0.03	<0.02	0.14	<0.02	*0.13*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.3
0861_MW055D_231024	MW055D	24/10/2023	EB2333887030	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW055S_231024	MW055S	24/10/2023	EB2333887029	Primary	**2.4**	0.17	0.25	1.39	0.08	*1.01*	<0.02	<0.1	0.04	0.17	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.22
0861_MW56I_231026	MW056I	30/10/2023	EB2333894067	Primary	0.03	<0.02	<0.02	0.02	<0.02	0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03
0861_MW056S_231026	MW056S	26/10/2023	EB2333898001	Primary	0.01	<0.02	<0.02	<0.01	<0.02	0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01
0861_MW057I_231129	MW057I	29/11/2023	EB2337879026	Primary	<0.02	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW057S_231129	MW057S	29/11/2023	EB2337879025	Primary	**1.11**	0.27	0.19	0.76	0.03	*0.35*	<0.02	<0.1	0.02	0.05	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.72
0861_MW309_231027	MW309	27/10/2023	EB2333887013	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01

LOR is limit of reporting
µg/L is micrograms per litre
'-' denotes no analysis undertaken
'<' denotes concentration is less than
NEMP is National Environmental Mangement Plan
HEPA is Heads of Environmental Protection Agencies
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values
Note that a concentration equal to the assessment criterion is not considered an exceedance.

Property ID	Location ID	Sample Date	Location	DO (mg/L)	EC (µS/cm)	pH	Er (mV)	Eh (mV)	Temp (°C)	Description	Odour	Sheen	Comments
0861	SW002	27/10/2023	Drain	4.89	475.3	7.72	75.1	280.1	21.8	Clear, low turbidity	No odour	Slight sheen	Grab sample
0861	SW003	29/11/2023	Drain	4.08	275.8	6.06	208.9	413.9	22.6	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW004	25/10/2023	Warrill Creek	2.84	631	7.56	121.7	326.7	23.7	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW005	25/10/2023	Warrill Creek	3.08	631	7.57	124.1	329.1	24.2	Brown, moderately turbid	No odour	No sheen	Grab sample
0861	SW008	25/10/2023	Drain	1.67	880	7.05	138.3	343.3	23.4	Light brown, moderately turbid	Organic and sulfuric odour	No sheen	Grab sample
0861	SW009	25/10/2023	Warrill Creek	2.68	632	7.54	118.9	323.9	23.6	Light green, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW011	24/10/2023	Drain	8.04	331.5	10.61	-7.8	197.2	31.2	Green/brown highly turbid	No odour	Biosheen	Grab sample
0861	SW015	25/10/2023	Warrill Creek	3.1	542	7.29	72.6	277.6	24.6	Light brown, low turbidity	Organic odour	No sheen	Grab sample
0861	SW016	25/10/2023	Warrill Creek	2.8	637	7.53	59.7	264.7	24.2	Clear, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW018	25/10/2023	Warrill Creek	3.08	6.5	7.58	112	317	25.5	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW020	25/10/2023	Warrill Creek	3.63	651	7.57	113	318	26	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW021	29/11/2023	Drain	2.38	237.5	6.99	133.2	338.2	30.8	Light orange, slightly turbid	No odour	No sheen	Grab sample
0861	SW025	26/10/2023	Bremer River	4.9	1969	8.42	67.6	272.6	25.8	Green, moderately turbid	Organic odour	Biosheen	Grab sample
0861	SW026	24/10/2023	Warrill Creek	5.7	829	8.03	47.9	252.9	28.3	Light brown, moderately turbid	Organic odour	Biosheen	Grab sample
0861	SW027	25/10/2023	Drain	4.26	379.2	6.96	127.9	332.9	25.3	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW028	29/11/2023	Drain	3.71	487.3	7.45	110.7	315.7	25	Light brown, moderately turbid	No odour	Biosheen	Grab sample
0861	SW030	24/10/2023	Drain	9.97	211.9	8.78	-17.1	187.9	32	Brown, highly turbid	Hydrocarbon odour	Oil sheen	Grab sample
0861	SW033	29/11/2023	Drain	1.95	320.9	7.11	132.6	337.6	32.9	Light orange, slightly turbid	No odour	No sheen	Grab sample
0861	SW034	25/10/2023	Warrill Creek	2.61	654	7.6	113.8	318.8	26.5	Light brown, moderately turbid	No odour	Biosheen	Grab sample
0861	SW036	24/10/2023	Bremer River	3.92	1842	7.88	72.7	277.7	23.5	Yellow, slightly turbidity	Organic odour	No sheen	Grab sample
0861	SW037	27/10/2023	Drain	4.22	1359	7.29	46.9	251.9	20	Light brown, slightly turbid	Organic odour	No sheen	Grab sample
0861	SW038	29/11/2023	Drain	3.19	325.6	6.85	110.3	315.3	26.6	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW039	26/10/2023	Bremer River	3.61	2045	8.2	79.5	284.5	25.8	Light brown, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW040	26/10/2023	Bremer River	4.46	856	8.01	79.7	284.7	28	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW041	-	Drain	Dry									
0861	SW043	26/10/2023	Warrill Creek	3.37	613	7.53	79.3	284.3	24.4	Clear, moderately turbid	No odour	No sheen	Grab sample
0861	SW045	26/10/2023	Bremer River	6.07	757	8.09	93	298	26.9	Clear, highly turbid	No odour	Biosheen	Grab sample
0861	SW047	23/10/2023	Bremer River	4.69	905	7.55	60.6	265.6	28.6	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW048	27/10/2023	Drain	5.69	146.5	7.73	76.1	281.1	20	Clear, non-turbid	No odour	No sheen	Grab sample
0861	SW049	23/10/2023	Drain	3.41	1824	7.97	42.4	247.4	26.8	Yellow-green, slightly turbid	No odour	Biosheen	Grab sample
0861	SW050	24/10/2023	Bremer River	2.89	626	7.33	86.2	291.2	26.9	Light yellow, slightly turbid	No odour	No sheen	Grab sample
0861	SW051	24/10/2023	Bremer River	2.11	601	7.35	-10.5	194.5	23.1	Clear, moderately turbid	No odour	No sheen	Grab sample
0861	SW052	-	Bremer River	Dry									
0861	SW053	29/11/2023	Drain	5.9	284.3	6.96	157.9	362.9	25.3	Clear, non-turbid	No odour	No sheen	Grab sample
0861	SW056	24/10/2023	Drain	2.68	227.4	7.31	11.8	216.8	27.8	Light brown, slightly turbid	Organic odour	No sheen	Grab sample
0861	SW059	27/10/2023	Drain	2.61	768	6.29	100.2	305.2	21.8	Light brown, moderately turbid	No odour	No sheen	Grab sample
0861	SW064	29/11/2023	Drain	1.9	226	6.63	118.1	323.1	28.3	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW067	29/11/2023	Drain	1.51	276.1	6.36	117	322	26.1	Clear, non-turbid	No odour	No sheen	Grab sample
0861	SW076	27/10/2023	Drain	1.87	1222	7.86	-0.9	204.1	23.7	Grey, highly turbid	Organic odour	No sheen	Grab sample
0861	SW079	29/11/2023	Drain	3.27	145.3	6.79	144.6	349.6	28.9	Brown, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW080	29/11/2023	Drain	4.16	243.9	7.06	110.7	315.7	28	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW088	23/10/2023	Bremer River	3.83	1967	8.12	-	-	27.3	Green, slightly turbid	Organic odour	No sheen	Grab sample
0861	SW089	23/10/2023	Bremer River	2.62	2085	7.95	99.1	304.1	28.3	Green, slightly turbid	Organic odour	Biosheen	Grab sample
0861	SW090	23/10/2023	Bremer River	3.51	2195	8.31	91.5	296.5	29.9	Yellow, slightly turbid	Organic odour	No sheen	Grab sample
0861	SW091	-	Bremer River	Dry									
0861	SW094	24/10/2023	Bremer River	1.84	1958	7.85	71.1	276.1	24.4	Clear, slightly turbidity	Organic odour	Biosheen	Grab sample
0861	SW098	26/10/2023	Bremer River	2.63	636	7.44	80.8	285.8	23.7	Clear, slightly turbid	Organic odour	No sheen	Grab sample
0861	SW099	24/10/2023	Warrill Creek	9.36	710	7.96	77.1	282.1	27.8	Light green/brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW100	24/10/2023	Warrill Creek	5.02	684	7.89	87	292	26.3	Clear light brown, non-turbid	Organic odour	No sheen	Grab sample

Notes
DO - Dissolved Oxygen
EC - Electrical Conductivity
Er - Uncorrected Oxidation Reduction Potential
Eh - Corrected Oxidation Reduction Potential
` - no data
Er converted to Eh by adding 205 based on a YSI with Ag/AgCl sensor calibrated to a 3.5 molar KCL solution
mg/L - milligrams per litre
µS/cm - microsiemens per centimetre
mV - millivolts
°C - degrees Celsius

	Sum of PFOS and PFHxS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.1	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.05	0.05	0.05	0.05	0.01
PFAS NEMP (HEPA, 2020) Freshwater 95%						0.13						220																		
PFAS NEMP (HEPA, 2020) Freshwater 99%						*0.00023*						*19*																		
PFAS NEMP (HEPA, 2020) Recreational Water	**2**											**10**																		

Field ID	Location	Date	Sample Code	Type	Sum of PFOS and PFHxS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
0861_SW002_231027	SW002	27/10/2023	EB2333887039	Primary	0.45	0.03	0.02	0.19	<0.02	*0.26*	<0.02	0.1	0.46	0.34	0.17	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.62
0861_SW003_231129	SW003	29/11/2023	EB2337879004	Primary	1.12	0.11	0.06	0.33	<0.02	*0.79*	<0.02	<0.1	0.15	0.15	0.04	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.69
0861_SW004_231025	SW004	25/10/2023	EB2333887040	Primary	0.06	<0.02	<0.02	0.02	<0.02	*0.04*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.06
0861_SW005_231025	SW005	25/10/2023	EB2333887041	Primary	0.05	<0.02	<0.02	0.01	<0.02	*0.04*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05
0861_SW008_231025	SW008	25/10/2023	EB2333887042	Primary	0.62	0.06	0.04	0.23	<0.02	*0.39*	<0.02	<0.1	0.05	0.08	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.89
0861_SW009_231025	SW009	25/10/2023	EB2333887043	Primary	0.03	<0.02	<0.02	<0.02	<0.02	*0.03*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03
0861_SW011_231024	SW011	24/10/2023	EB2333887044	Primary	1.39	0.06	0.05	0.5	0.03	*0.89*	<0.02	<0.1	0.04	0.07	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.68
0861_SW015_231025	SW015	25/10/2023	EB2333887045	Primary	0.07	<0.02	<0.02	0.02	<0.02	*0.05*	<0.02	<0.2	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07
0861_SW016_231025	SW016	25/10/2023	EB2333887046	Primary	0.06	<0.02	<0.02	0.02	<0.02	*0.04*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.06
0861_SW018_231025	SW018	25/10/2023	EB2333887047	Primary	0.02	<0.02	<0.02	<0.01	<0.02	*0.02*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02
0861_SW020_231025	SW020	25/10/2023	EB2333887048	Primary	0.04	<0.02	<0.02	<0.02	<0.02	*0.04*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.04
0861_SW021_231129	SW021	29/11/2023	EB2337879005	Primary	**8.26**	0.73	0.49	2.74	0.13	*5.52*	<0.04	0.3	0.79	1.01	0.19	0.42	0.05	<0.02	<0.02	<0.02	<0.02	<0.06	<0.02	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.4
0861_SW025_231026	SW025	26/10/2023	EB2333898003	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.2	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW026_231024	SW026	24/10/2023	EB2333898005	Primary	0.29	<0.02	<0.02	0.07	<0.02	*0.22*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.29
0861_SW027_231129	SW027	29/11/2023	EB2337879006	Primary	1.52	0.07	0.07	0.63	0.03	*0.89*	<0.02	<0.1	0.05	0.11	0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.93
0861_SW028_231025	SW028	25/10/2023	EB2333887049	Primary	**2.22**	0.81	0.33	1.28	0.03	*0.94*	<0.02	<0.1	0.06	0.2	<0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.7
0861_SW030_231024	SW030	24/10/2023	EB2333887050	Primary	**2.95**	0.12	0.09	0.64	0.04	*2.31*	<0.02	0.1	0.2	0.18	0.09	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.07	<0.05	<0.05	3.93
0861_SW033_231129	SW033	29/11/2023	EB2337879007	Primary	**13**	1.54	0.99	4.9	0.17	*8.13*	<0.06	0.6	1.23	1.9	0.25	0.63	<0.04	<0.02	<0.02	<0.02	<0.02	<0.06	0.03	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	20.4
0861_SW034_231025	SW034	25/10/2023	EB2333887051	Primary	0.05	<0.02	<0.02	<0.02	<0.02	*0.05*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05
0861_SW036_231024	SW036	24/10/2023	EB2333887052	Primary	0.1	<0.02	<0.02	0.04	<0.02	*0.06*	<0.02	0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.2
0861_SW037_231027	SW037	27/10/2023	EB2333887053	Primary	**11.7**	2.68	1.93	7.54	0.29	*4.19*	<0.02	0.5	1.15	3.24	1.04	1.43	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.12	<0.05	<0.05	24.1
0861_SW038_231129	SW038	29/11/2023	EB2337879008	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW039_231026	SW039	26/10/2023	EB2333898007	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW040_231026	SW040	26/10/2023	EB2333898009	Primary	0.26	<0.02	<0.02	0.11	<0.02	*0.15*	<0.02	<0.1	<0.02	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.28
0861_SW043_231026	SW043	26/10/2023	EB2333898011	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW045_231026	SW045	26/10/2023	EB2333898013	Primary	0.17	<0.02	<0.02	0.06	<0.02	*0.11*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.17
0861_SW047_231023	SW047	23/10/2023	EB2333887054	Primary	<0.01	<0.02	<0.02	<0.03	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW049_231023	SW047	23/10/2023	EB2333894073	Primary	1.81	0.14	0.1	0.69	0.04	*1.12*	<0.02	0.2	0.11	0.23	0.04	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.78
0861_SW048_231027	SW048	27/10/2023	EB2333887055	Primary	**2.96**	<0.14	0.08	0.54	0.04	*2.42*	<0.02	<0.1	0.08	0.34	0.14	0.18	0.04	0.03	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.76	<0.05	<0.05	4.65
0861_SW050_231024	SW050	24/10/2023	EB2333887057	Primary	0.51	0.02	0.02	0.12	<0.02	*0.39*	<0.02	<0.1	0.03	0.04	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.64
0861_SW051_231024	SW051	24/10/2023	EB2333887058	Primary	0.54	0.02	0.03	0.17	<0.02	*0.37*	<0.02	<0.1	0.04	0.06	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.72
0861_SW053_231129	SW053	29/11/2023	EB2337879010	Primary	1.51	0.05	0.04	0.41	0.02	*1.1*	<0.02	<0.1	<0.02	0.06	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.7
0861_SW056_231024	SW056	24/10/2023	EB2333887059	Primary	**7.77**	0.79	0.69	3.34	0.18	*4.43*	<0.02	0.3	0.78	1.18	0.46	0.48	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.05	<0.05	<0.05	12.7
0861_SW059_231027	SW059	27/10/2023	EB2333887060	Primary	**7.32**	0.88	0.59	3.12	0.15	*4.2*	<0.02	0.2	0.43	0.89	0.3	0.49	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	11.3
0861_SW064_231129	SW064	29/11/2023	EB2337879011	Primary	1.78	0.42	0.2	0.83	0.04	*0.95*	<0.02	<0.1	0.1	0.16	0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	2.76
0861_SW067_231129	SW067	29/11/2023	EB2337879012	Primary	**12.3**	1.96	1.17	5.88	0.21	*6.41*	<0.04	1.2	1.89	1.97	0.2	0.27	0.07	0.02	<0.02	<0.02	<0.02	<0.06	<0.02	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	21.2
0861_SW076_231027	SW076	27/10/2023	EB2333887061	Primary	**6.51**	0.7	0.6	3.1	0.16	*3.41*	<0.02	0.3	0.66	0.99	0.38	0.47	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	10.8
0861_SW079_231129	SW079	29/11/2023	EB2337879013	Primary	0.13	<0.02	<0.02	0.05	<0.02	*0.08*	<0.02	<0.1	<0.02	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.15
0861_SW080_231129	SW080	29/11/2023	EB2337879014	Primary	**5.19**	0.31	0.25	1.74	0.14	*3.45*	<0.02	<0.1	0.18	0.34	0.07	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	6.62
0861_SW088_231023	SW088	23/10/2023	EB2333887062	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW089_231023	SW089	23/10/2023	EB2333887063	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW090_231023	SW090	23/10/2023	EB2333887064	Primary	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_SW094_231024	SW094	24/10/2023	EB2333887065	Primary	0.1	<0.02	<0.02	0.05	<0.02	*0.05*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.1
0861_SW098_231026	SW098	26/10/2023	EB2333898015	Primary	0.54	0.03	0.03	0.2	<0.02	*0.34*	<0.02	<0.2	0.05	0.06	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.73
0861_SW099_231024	SW099	24/10/2023	EB2333887066	Primary	0.05	<0.02	<0.02	<0.02	<0.02	*0.05*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05
0861_SW100_231024	SW100	24/10/2023	EB2333887067	Primary	0.05	<0.02	<0.02	0.01	<0.02	*0.04*	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.1	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.05

Notes:
LOR is limit of reporting
µg/L is micrograms per litre
'-' denotes no analysis undertaken
'<' denotes concentration is less than
NEMP is National Environmental Mangement Plan
HEPA is Heads of Environmental Protection Agencies
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values
Note that a concentration equal to the assessment criterion is not considered an exceedance.

Location ID	Sample Date	Location	Sample Description	Odour	Notes on River Conditions
SD002	27/10/2023	Drain	Sandy Clay, dark brown.	No odour	Manmade drainage channel around 10m width, running west to east. Water is shallow, ~0.1m depth, pooled, clear with bright green algae and aquatic plants. Long grass in channel. Sediment slug to the east of the culvert.
SD003	27/10/2023	Drain	Sandy Clay, light brown.	No odour	Wide and deep drainage channel, draining north west from the airstrip. Around 40m width and 10m depth. Steep eroded bank to the south west. Heavily vegetated channel with grass, reeds and trees. Reenforced north east bank with large angular boulders.
SD004	25/10/2023	Warrill Creek	Sandy Gravel, light brown.	No odour	Abundant woody debris in river channel. Eroded southern bank. Brown, flowing water, around 0.5m depth. Flowing west to east. Evidence of flooding (stacked debris).
SD005	25/10/2023	Warrill Creek	Silty Clay, dark grey, low plasticity with some fine grained sand.	Organic odour	Brown, flowing water (west to east). Appears to be around 0.5m maximum depth. Clear, brown water with fish present. Established riparian vegetation on north bank. Steep eroded southern bank with no riparian vegetation, followed by grassed floodplain to the south. Woody debris within river channel.
SD008	25/10/2023	Drain	Sandy Silty Clay, grey brown.	Organic odour	Still, pooled water with gently sloping grassed banks. Reeds and grass within channel. Flows west to east. Maximum 1m depth. Maximum 5m width.
SD009	25/10/2023	Warrill Creek	Sand, brown grey	Organic odour	Flowing, west to east, slightly cloudy, brown water. Around 1m depth, and around 10m width. Vegetated sediment island within creek with established trees and grasses. Woody debris within channel. Fish present. Southern bank issteep and eroded with no vegetation. North bank
SD011	24/10/2023	Drain	Sandy Clay, grey.	Organic odour	Shallow, slowly flowing drainage channel. <40cm maximum depth. No riparian vegetation. Grassed banks. Cobble reenforcement of banks. Aquatic plants in drain.
SD015	25/10/2023	Warrill Creek	Sandy Gravel, light brown.	Organic odour	Gently flowing west to east. Slightly cloudy water. ~0.3m depth. Heavily vegetated on north bank with established trees and native grasses. Gently sloping north bank. South bank is steep with visible erosion and less vegetation.
SD016	25/10/2023	Warrill Creek	Sandy Clay, light brown with some gravel.	Organic odour	Still, clear water, brown in colour. Established riparian vegetation on north bank. Woody debris within channel. Fish observed in creek. Rubbish filled embankment ~20m north consists of concrete slabs, construction material, steel debris.
SD018	25/10/2023	Drain entering Warrill Creek	Gravelly Sand, brown with trace of clay.	No odour	Clear, gently flowing water W to E. Approximately 0.3m depth. Wood debris in river channel. Large angular cobbles in channel (~30 cm). Well vegetated on both banks. Creek bed contains native grass vegetation. Lots of rubbish observed, including bottles, concrete, metal, and asbestos. Construction rubble in creek channel.
SD020	25/10/2023	Warrill Creek	Sand, light brown.	No odour	Clear, still water. Heavily vegetated riparian banks to the north and south. Water gently flowing west to east. Water depth maximum 0.3m. Evidence of flooding (debris in trees).
SD021	23/10/2023	Drain	Clay, light brown.	No odour	Shallow, pooled, still water around 0.2m maximum depth. Thick grass and vegetation surrounding sample location.
SD025	26/10/2023	Bremer River	Sandy Gravel, brown and black.	Organic odour	Still pooled water. Flow direction south to north evidenced by debris build up. Black water with small aquatic surface water plants. Depth >1m, width ~20m. Sparcely vegetated banks. Gradual sloping banks (<10°), with steep drop at waters edge.
SD026	24/10/2023	Warrill Creek	Silty Clay, dark brown with organic matter.	Organic odour	Still, pooled, deep water. Very narrow channel, around 2m width. Heavily vegetated banks with native grasses and well established trees. Steep banks. Woody debris within and across the channel. Flow direction south to north.
SD027	24/10/2023	Drain	Clay.	No odour	Heavily modified creek bed. Vegetated with reeds and trees. Flow direction east to west. Manmade cobble embankment to the south. Grassed, eroding bank to the north.
SD028	25/10/2023	Frogs Hollow Gully (Drain)	Sandy Clay, brown grey.	Organic odour	Pooled water channel with aquatic plants on the surface. Fish and tadpoles present. Long grass surrounding the channel (~1m high). No riparian vegetation. Relatively flat catchment (<5°) surrounding the channel. Water is black. Unable to see the bottom. Channel is ~ 2m width, and around 0.5m maximum depth. Appears to flow west to east.
SD030	24/10/2023	Drain	Silt, light brown.	Organic odour	Drain beside road. Flat land surrounding. Manmade banks. No riparian vegetation. Grassed mown banks.
SD033	30/10/2023	Drain	Clay , dark brown with trace of sand.	No odour	Gently flowing east to west. Man made channel capturing runoff from training area and release from new water treatment tanks. Ponds immediatley adjacent to the south. Currently empty. Channel bed contains large angular cobbles and reenforcement wire.
SD034	25/10/2023	Warrill Creek	Sandy Gravel, brown.	No odour	Still brown water ~0.3m depth. Heavily vegetated riparian zones on both banks. Native grasses within channel. Rubbish observed in northern bank, including porcelain, glass, and rubber. Narrow drainage channel entering creek from the north to south at sample location.
SD036	24/10/2023	Bremer River	Clay, dark grey, slightly sandy with organic matter.	No odour	Pooled deep water in channel. Unable to see the bottom. Large established gums and trees in channel. Aquatic plants covering entire surface. Western bank vegetated with grass and trees. Eastern bank is gently sloping, vegetated with native grasses. Channel is within a regeneration area.
SD037	27/10/2023	Drain	Clay, dark brown.	No odour	Minimal water <0.1m depth. Still, pooled, and stagnant water. Very shallow drainage channel with mown grassed banks. Tall reeds around 2m high within channel.
SD038	29/11/2023	Drain	Sandy Clay, dark brown with organic matter (leaf litter).	Organic odour	Still poolled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area.
SD039	26/10/2023	Bremer River	Clay, grey black with trace of sand.	Organic odour	Still pooled water beneath bridge. <0.2m depth. Large subangular boulders and cobbles within channel. Creek bed is vegetated with reeds and grasses and well established trees. Flow direction is S to N evidenced by woody debris within the creek.
SD040	26/10/2023	Bremer River	Sandy Gravel, grey brown with organic matter (leaf litter).	Organic odour	Large, deep, still dam, with brown coloured water. Around 20m width. Depth >1m. Heavily vegetated banks on both sides. Well established trees and native grasses on both gently sloping banks. Vegetated bank around 50m width on north side. Drainage channel entering the dam from the NW. Sample taken around 2m upstream of drainage channel.
SD041	24/10/2023	Drain	Silt, light grey and brown with organic matter (leaf litter).	No odour	Clear, black, pooled, still water. Maximum 0.3m depth. Channel is heavily vegetated with tall reeds. Large angular boulders within channel.
SD043	26/10/2023	Warrill Creek	Silty Clay, dark grey with some sand.	No odour	Clear, flowing creek. Flowing south to north. Erosion channels on eastern bank beneath the bridge. Black cracking clays. Banks are well vegetated. Channel is around 5m width.
SD045	26/10/2023	Bremer River	Silty Clay, dark grey with some sand.	No odour	Still, clear, brown water, flowing west to east. Small aquatic plants on surface. Well vegetated banks on both sides with native grasses and trees.Gently sloping banks with a steep drop off next to sampling point. Woody debris along banks.
SD047	23/10/2023	Bremer River	Clay, dark brown with sand and organic matter (leaf litter).	Organic odour	Deep pooled water. Very steep bank on the western side. Channel around 40m width. Vegetated island with well established gums and trees within the river channel.
SD048	27/10/2023	Drain	Clayey Sand, brown.	No odour	Drainage leads from hangar to the north ~40m. Land slopes to the south west. Mowed grassed area.
SD049	23/10/2023	Drain	Clay, light brown and grey, very soft.	No odour	Large dam at the bottom of a grassy slope. Around 100m diameter. Deep, still, brown water. Aquatic reeds surrounding the banks. Ducks and fish present. Slopes gently from the east to the west.
SD050	24/10/2023	Bremer River	Clay, dark grey.	No odour	Manmade drainage channel around 10m width, running W to E. Water is still and shallow. Around 0.2m depth. Banks are gently sloping and stabilised with large angular boulders. Aquatic plants within channel.
SD051	24/10/2023	Bremer River	Sand with organic matter.	No odour	Deep pooled, still water. Flow direction N to S evidenced by flood debris in trees. Very steep embankment. Channel around 5m width. Green scum covering entire surface. Woody debris within channel. Overland flow across embankments evident with rubbish (corrugated iron) running W to E. Heavily vegetated banks with native grasses, reeds, and trees.
SD052	23/10/2023	Bremer River	Silty Clay, brown, dry.	No odour	Still, pooled, deep water. Narrow channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is W to E evidenced by flood debris in trees. Very steep banks.
SD053	29/11/2023	Drain	Clay, dark brown with some sand.	No odour	Manmade drainage channel surrounding the runway. Water flowing south to north. Very shallow. Concrete base with 4 drains entering channel. Green algae in water. Clear. Very gently sloping mown grassed banks.
SD056	24/10/2023	Drain	Sandy Clay, black.	Organic odour	Flat surrounding land. Very gently sloping banks. Channel is around 2m maximum width. Depth around 0.2m max. Grassed mown banks. Reeds and aquatic plants within channel. Still, pooled water.
SD059	27/10/2023	Drain	Clay, dark brown.	No odour	Still pooled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area. H37
SD064	29/11/2023	Drain	Clay, dark brown with some sand.	No odour	Very shallow, narrow drainage channel bordering the runway. Mown grassed area surrounding sample location.
SD067	29/11/2023	Drain	Clay, dark brown with some sand.	No odour	Small drainage channel. Concrete culvert contains dark green water. Culvert is covered with a grill. Very shallow channel. Mown grassed banks. Dry during visit.
SD076	27/10/2023	Drain	Clay with organic matter.	Organic odour	Flat surrounding land. Very shallow banks. Channel is around 10m width. Very shallow water flowing E to W (~10cm). Channel vegetated with reeds around 1.5m high
SD079	29/11/2023	Drain	Clay, dark brown with sand.	Organic odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Very tall reeds in channel. Green and brown algae in channel. No flow. Shallow. Around 0.2m depth. Very gently sloping mown grassed banks.
SD080	29/11/2023	Drain	Clay, dark brown with sand.	No odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Sediment build up on the southern side of the culvert. Very gently sloping mown grassed banks.
SD088	23/10/2023	Bremer River	Clay, dark brown, some fine sand and organic matter.	Organic odour	Deep, wide channel. Entire surface is covered with small aquatic plants. Gently sloping vegetated banks. Woody debris within channel. Flow direction is west to east.
SD089	23/10/2023	Bremer River	Clay, dark brown, organic matter (leaf litter).	Organic odour	Still, pooled, shallow water. Entire surface is covered with small aquatic plants. Woody debris across channel. Fallen trees across the banks. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD090	23/10/2023	Bremer River	Clay, dark brown, organic matter (leaf litter).	Organic odour	Still, pooled, deep water. Channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD091	23/10/2023	Bremer River	Clay, light brown.	No odour	Still, pooled, clear water. Small aquatic plants on surface. Woody debris within creek channel. Fallen trees across channel. Channel around 3m width. Water around 0.3m depth. Heavily vegetated banks. Banks are fenced off for regeneration. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD094	24/10/2023	Bremer River	Sandy Clay with organic matter (leaf litter).	Organic odour	Shallow, pooled water in creek channel. Not flowing, clear, brown. Large woody debris within channel. Vegetated banks. Steep easterly bank, gently sloping on the west. Western bank is a revegetation area. Flow direction is north to south, evidenced by flood debris within the channel. Drainage channel entering the creek from the northwest to southeast. Heavily eroded.
SD098	26/10/2023	Bremer River	Clay, grey and black.	Organic odour	Still pooled water beneath bridge. ~0.5m depth. Clear, with a brown colour. Water flow north to south evidenced by debris build up within creek. Film of white/green substance on water surface. Geofab on embankments. Vegetated banks on both sides with native grass and trees.
SD099	24/10/2023	Warrill Creek	Silty Clay, light brown with organic matter.	Organic odour	Deep, wide channel. Brown, turbid water. Gently flowing south to north. Woody debris along banks. Grassed bank to the west. Vegetated with well established trees to the east.
SD100	24/10/2023	Warrill Creek	Clayey Silt grey, very soft with organic matter.	Organic odour	Deep, narrow channel, gently flowing east to west. Clear, green/brown colour. Flood debris in trees and on banks. Very steep north bank. Long grass and vegetation on south bank.

	Sum of PFOS and PFHxS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.0002	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	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002

Location ID	Sample ID	Sample Date	Lab Report No.	Type	Sum of PFOS and PFHxS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
SD002	0861_SD002_231027	27/10/2023	EB2333894001	Primary	0.0041	<0.0002	<0.0002	0.0003	<0.0002	0.0038	<0.0002	<0.001	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0045
SD003	0861_SD003_231027	27/10/2023	EB2333894002	Primary	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0006
SD004	0861_SD004_231025	25/10/2023	EB2333894077	Primary	0.0057	<0.0002	<0.0002	0.0003	<0.0002	0.0054	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0057
SD005	0861_SD005_231025	25/10/2023	EB2333894004	Primary	0.003	<0.0002	<0.0002	<0.0002	<0.0002	0.003	0.0003	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0033
SD008	0861_SD008_231025	25/10/2023	EB2333894005	Primary	0.0359	<0.0002	<0.0002	0.0016	<0.0002	0.0343	0.0014	<0.001	<0.0002	0.0003	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	0.0003	0.0003	0.0002	<0.0005	0.0009	<0.0005	<0.0005	<0.0005	<0.0002	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	0.0398
SD009	0861_SD009_231025	25/10/2023	EB2333894006	Primary	0.0021	<0.0002	<0.0002	<0.0002	<0.0002	0.0021	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0021
SD011	0861_SD011_231024	24/10/2023	EB2333894007	Primary	0.105	<0.0002	<0.0005	0.0071	<0.0002	0.0976	<0.0002	0.001	<0.0002	0.0009	<0.0002	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	0.0006	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.107
SD015	0861_SD015_231025	25/10/2023	EB2333894008	Primary	0.0073	<0.0002	<0.0002	0.0004	<0.0002	0.0069	<0.0003	<0.001	<0.0002	0.0003	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0076
SD016	0861_SD016_231025	25/10/2023	EB2333894009	Primary	0.0035	<0.0002	<0.0002	<0.0002	<0.0002	0.0035	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0035
SD018	0861_SD018_231025	25/10/2023	EB2333894010	Primary	0.0058	<0.0002	<0.0002	<0.0002	<0.0002	0.0058	<0.0003	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0058
SD020	0861_SD020_231025	25/10/2023	EB2333894011	Primary	0.0064	<0.0002	<0.0002	<0.0002	<0.0002	0.0064	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0064
SD021	0861_SD021_231023	23/10/2023	EB2333894012	Primary	0.387	0.0092	0.0081	0.0503	0.0038	0.337	0.0235	0.005	0.006	0.0163	0.0048	0.0123	0.0018	0.0014	0.0045	0.0029	0.0051	<0.0005	0.0136	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0015	<0.0005	0.506
SD025	0861_SD025_231026	26/10/2023	EB2333898004	Primary	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD026	0861_SD026_231024	24/10/2023	EB2333898006	Primary	0.024	<0.0002	<0.0002	<0.0005	<0.0002	0.024	<0.0012	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	0.0016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0256
SD027	0861_SD027_231024	24/10/2023	EB2333894013	Primary	0.0273	<0.0003	0.0003	0.003	<0.0005	0.0243	<0.0003	<0.001	<0.0002	0.0003	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0005	<0.0012	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0279
SD028	0861_SD028_231025	25/10/2023	EB2333894014	Primary	0.0211	0.0005	<0.0002	0.0015	<0.0002	0.0196	<0.0002	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0218
SD030	0861_SD030_231024	24/10/2023	EB2333894015	Primary	0.0411	<0.0002	<0.0002	0.0023	<0.0004	0.0388	<0.0004	<0.001	<0.0002	0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	0.0003	<0.0005	0.0003	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0421
SD033	0861_SD033_231030	30/10/2023	EB2333894016	Primary	0.322	0.0086	0.0057	0.0309	0.003	0.291	0.0093	0.005	0.0064	0.0118	0.0015	0.0057	0.0012	0.0008	0.0013	0.0011	0.0015	<0.0005	0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.385
SD034	0861_SD034_231025	25/10/2023	EB2333894017	Primary	0.0035	<0.0002	<0.0002	<0.0002	<0.0002	0.0035	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0035
SD036	0861_SD036_231024	24/10/2023	EB2333894018	Primary	<0.0002	<0.0008	<0.0002	<0.0002	<0.0002	<0.0041	<0.0036	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0025	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD037	0861_SD037_231027	27/10/2023	EB2333894019	Primary	1.24	0.0374	0.0276	0.183	0.0195	1.06	0.0041	<0.013	0.0142	0.0391	0.0062	0.0251	0.0019	0.003	0.0021	<0.0023	0.0009	<0.0006	0.0017	<0.0006	<0.0009	<0.0006	<0.0006	<0.0002	<0.0002	<0.0005	0.0026	0.0009	<0.0005	1.43
SD038	0861_SD038_231129	29/11/2023	EB2337879017	Primary	0.0019	<0.0002	<0.0002	<0.0002	<0.0002	0.0019	<0.0002	<0.001	<0.0002	<0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.0006	<0.0006	<0.0006	<0.0006	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0019
SD039	0861_SD039_231026	26/10/2023	EB2333898008	Primary	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0014	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD040	0861_SD040_231026	26/10/2023	EB2333898010	Primary	0.0134	<0.0002	<0.0002	0.0004	<0.0002	0.013	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0013	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0134
SD041	0861_SD041_231024	24/10/2023	EB2333894020	Primary	1.8	0.0169	0.0259	0.245	0.0336	1.55	0.0226	0.002	0.0036	0.0184	0.006	0.0307	0.0022	0.0038	0.0069	0.0093	0.0011	<0.0005	0.0044	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0006	<0.0005	0.0016	<0.003	<0.001	1.98
SD043	0861_SD043_231026	26/10/2023	EB2333898012	Primary	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD045	0861_SD045_231026	26/10/2023	EB2333898014	Primary	0.0094	<0.0002	<0.0002	0.0004	<0.0002	0.009	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0094
SD047	0861_SD047_231023	23/10/2023	EB2333894021	Primary	0.0018	<0.0002	<0.0002	<0.0002	<0.0002	0.0018	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0018
SD047	0681_QC106_231023	23/10/2023	EB2333894045	Duplicate	0.0014	<0.0002	<0.0002	<0.0002	<0.0002	0.0014	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0014
SD047	0861_QC206_231023	23/10/2023	N23/022983	Triplicate	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
SD048	0861_SD048_231027	27/10/2023	EB2333894022	Primary	0.127	0.0003	0.0007	0.0086	0.0015	0.118	0.0024	<0.001	0.0003	0.001	0.0005	0.001	0.0006	0.0004	0.0007	0.0011	0.0012	0.0012	0.0017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	0.0018	0.0007	<0.0005	0.144
SD050	0861_SD050_231024	24/10/2023	EB2333894024	Primary	0.0094	<0.0002	<0.0002	0.0008	<0.0002	0.0086	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0097
SD051	0861_SD051_231024	24/10/2023	EB2333894025	Primary	0.0015	<0.0002	<0.0002	<0.0002	<0.0002	0.0015	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0015
SD052	0861_SD052_231023	23/10/2023	EB2333894026	Primary	<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	<0.0025	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
SD052	0681_QC104_231023	23/10/2023	EB2333894041	Duplicate	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0022	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD052	0861_QC204_231023	23/10/2023	N23/022981	Triplicate	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
SD053	0861_SD053_231129	29/11/2023	EB2337879018	Primary	0.0153	0.0005	0.0003	0.0024	<0.0002	0.0129	<0.0002	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0165
SD056	0861_SD056_231024	24/10/2023	EB2333894027	Primary	0.421	0.0097	0.0082	0.0609	0.005	0.36	<0.0028	0.006	0.0109	0.0177	0.004	0.0075	0.0011	0.001	0.0011	0.0024	0.001	<0.0013	0.0009	<0.0013	<0.0013	<0.0013	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0005	<0.0005	0.498
SD059	0861_SD059_231027	27/10/2023	EB2333894028	Primary	0.419	0.0023	0.0035	0.0412	0.0047	0.378	0.0112	0.001	<0.0044	0.0048	0.0018	0.0073	0.0016	0.0012	0.0016	0.0022	0.0006	<0.0005	0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.464
SD064	0861_SD064_231129	29/11/2023	EB2337879019	Primary	0.232	0.0014	<0.0014	0.0126	0.0013	0.219	0.0026	<0.002	0.0014	0.0011	<0.0005	0.001	<0.0005	<0.0005	<0.0008	0.001	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0012	<0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.241
SD067	0861_SD067_231129	29/11/2023	EB2337879020	Primary	1.41	0.0094	0.011	0.126	0.0094	1.28	0.0204	<0.025	0.0127	0.022	<0.0049	0.0099	<0.0049	0.0066	0.0121	0.0281	0.0088	<0.0123	<0.0049	<0.0123	<0.0123	<0.0123	<0.0123	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	1.56
SD076	0861_SD076_231027	27/10/2023	EB2333894029	Primary	0.476	0.0062	0.0056	0.048	0.0049	0.428	0.0044	0.004	0.0062	0.0113	0.0026	0.0067	0.0013	0.0014	0.0018	0.0037	0.0012	<0.0006	<0.0002	<0.0006	<0.0006	<0.0006	<0.0006	<0.0002	<0.0002	<0.0005	0.0011	<0.0005	<0.001	0.538
SD079	0861_SD079_231129	29/11/2023	EB2337879021	Primary	0.46	<0.0012	<0.0016	0.0218	0.0042	0.438	0.0052	<0.006	0.0022	0.0029	<0.0012	0.0018	<0.0012	<0.0012	<0.0012	0.0028	<0.0012	<0.0031	0.003	<0.0031	<0.0031	<0.0031	<0.0031	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	0.482
SD080	0861_SD080_231129	29/11/2023	EB2337879022	Primary	0.712	0.0046	0.0046	0.0426	0.0057	0.669	0.0126	<0.006	0.0029	0.0052	<0.0013	0.004	<0.0013	<0.0013	0.0017	0.0046	0.0027	<0.0032	<0.0038	<0.0032	<0.0032	<0.0032	<0.0032	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	0.76
SD088	0861_SD088_231023	23/10/2023	EB2333894030	Primary	<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	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD088	0681_QC105_231023	23/10/2023	EB2333894043	Duplicate	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0003	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD088	0861-_QC205_231023	23/10/2023	N23/022982	Triplicate	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
SD089	0861_SD089_231023	23/10/2023	EB2333894031	Primary	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD090	0861_SD090_231023	23/10/2023	EB2333894032	Primary	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0034	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD090	0681_QC103_231023	23/10/2023	EB2333894039	Duplicate	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD090	0861_QC203_231023	23/10/2023	N23/022980	Triplicate	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
SD091	0861_SD091_231023	23/10/2023	EB2333894033	Primary	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD091	0681_QC102_231023	23/10/2023	EB2333894037	Duplicate	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
SD091	0861_QC202_231023	23/10/2023	N23/023140	Triplicate	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
SD094	0861_SD094_231024	24/10/2023	EB2333894034	Primary	<0.002	<0.002	<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	<0.005	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
SD098	0861_SD098_231026	26/10/2023	EB2333898016	Primary	0.0012	<0.0002	<0.0002	<0.0002	<0.0002	0.0012	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0012
SD099	0861_SD099_231024	24/10/2023	EB2333894035	Primary	0.0031	<0.0002	<0.0002	<0.0002	<0.0002	0.0031	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0031
SD100	0861_SD100_231024	24/10/2023	EB2333894036	Primary	<0.002	<0.002	<0.002	<0.0023	<0.002	<0.002	<0.002	<0.01	<0.002	<0.0024	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Notes:
LOR is limit of reporting
mg/kg is milograms per kilogram
'-' denotes no analysis undertaken
'<' denotes concentration is less than
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values

Appendix C

Analytical Data Validation

Appendix C Analytical Data Validation

DATA VALIDATION REPORT

Project No.:	60612563	**Validation by:** AA	**Date:** 15/12/2023
Client:	Department of Defence		
Site:	Royal Australian Airforce Base, Amberley		
Matrix type:	Groundwater, surface water, sediment	**Data verified by:** JP	**Date:** 18/12/2023
No. of primary samples:	39 groundwater, 46 surface water, 48 sediment		
Laboratory:	ALS (Brisbane), NMI (Sydney)	**Project Manager:** JP	
Lab reference:	EB2333887, EB2333894, EB2333895, EB2333898, EB2337879, RN1410504		

Key Issues:	With one exception, no key QA/QC issues were identified in the field or laboratory datasets that could have a material implication on data interpretation and therefore decision-making on the project. The data are considered appropriate for use to meet the project objectives.

Field QA/QC

Sampling personnel	Sampling was conducted by AECOM environmental scientists between 23 and 27 October 2023, 30 October 2023, and 29 November 2023.
Sampling Methodology	Samples were collected using appropriate methods as identified within the main body of the report and as presented in the SAQP. Field parameters were measured using a water quality meter prior to sample collection. The probe on the water quality meter was decontaminated prior to use.
Chain of Custody	COC documents were completed as per AECOM procedures.
Rinsate Blank	Rinsate blank samples were collected at a frequency of one per day of sampling where appropriate (seven in total) during the monitoring between 23 and 27 October 2023, 30 October 2023, and 29 November 2023. Rinsate blank samples were collected from the decontaminated interface probe. Results are presented in **Table C1**. PFAS concentrations were not detected exceeding the LOR in all samples tested.
Field Blanks	Field blank samples were collected at a frequency of one per day of sampling (seven in total between 23 and 27 October 2023, 30 October 2023, and 29 November 2023) by filling sample containers with laboratory supplied deionised water in the field. All field blanks reported concentrations below the LOR for the analytes tested. See **Table C1**.
Trip Blanks	Trip blank samples were present during the transport of samples collected between for the primary laboratory samples. Trip blanks were present in six batches including three soil trip blanks and three water blanks. All concentrations were reported below the LOR, see **Table C1** (water) and **Table C2** (soil).
Frequency of field QC	Field duplicate (inter-laboratory duplicates) and triplicates (inter-laboratory duplicates) were collected (see **Tables C3** and **C4**). There were five duplicates/triplicate sets for sediment samples, which achieved the target rate of 10%. There were nine duplicates and eight triplicates collected for water samples (inclusive of groundwater and surface water samples). One of the triplicate samples did not arrive at the laboratory. The frequency of field QC was 10% for duplicate and 9.4% for triplicate samples. The number of field QC samples approximately achieves the expected frequency for each media type.

Handling and preservation	Primary, duplicate and triplicate samples were received preserved and chilled at the laboratory. All samples were received at the laboratory in appropriate sample containers with no sample container non-compliances noted.
Laboratory QA/QC	
Tests requested/reported	Samples were analysed and reported as requested on the COC.
Holding time compliance	Samples were extracted and analysed within recommended holding times.
Laboratory Accreditation	The laboratory analysis was conducted by ALS Environmental Pty Ltd (Brisbane) a National Association of Testing Authorities (NATA) accredited laboratory. The triplicate samples were analysed at the National Measurement Institute (NMI) (Sydney), also a NATA accredited laboratory.
Frequency of laboratory QC	The laboratory reported a sufficient frequency of quality control samples to assess whether the results have been reported to an acceptable accuracy and precision, except for the following: Laboratory duplicates below expected rate of 10% for PFAS in the following batches: • EB2333887 (1.3%) 75 samples in batch • EB2333894 (0.0%) 27 samples in batch • EB2337879 (0.0%) 18 samples in batch Matrix spikes below expected rate of 5% for PFAS in the following batches: • EB2333887 (1.3%) 75 samples in batch • EB2333894 (0.0%) 27 samples in batch • EB2337879 (0.0%) 18 samples in batch The reason for insufficient matrix spikes and laboratory duplicates for these batches is due to the way the laboratory assigns the duplicates and matrix spikes and the availability of additional bottles. The laboratory LIMS assigns laboratory QC to samples in the analytical run; however, the runs may not allocate samples to allow for frequency compliance. However, as all other laboratory QC results met control limits this is not expected to impact data quality.
Method Blank	No method blank non-conformances were reported.
Laboratory duplicate RPDs	No laboratory duplicate non-conformances were reported.
Laboratory control spike recovery	All Laboratory Control Spikes (LCS) recoveries (where reported) were within control limits, except: • EB2333887 (water): LCS recovery for PFDoDA, PFTrDA, MeFOSA and 10:FTS were greater than the upper control limit. • EB2333894 (water): LCS recovery for PFTrDA and MeFOSA were greater than the upper control limit. LCS are known, interference-free matrix spiked with target analytes or certified reference material. The purpose of this quality control type is to monitor precision and accuracy independent of sample matrix and to indicate if the analytical procedure is in control and evaluates the laboratory capability to report unbiased results. Although some non-conformances have been detected in a small number of QC samples, the non-conformances do not include the key analytes, PFHxS and PFOS so the understanding of the concentrations of these compounds is not impacted.
Matrix spike recovery	All matrix spike (MS) recoveries (where reported) were within control limits, except: • EB2333894 (soil): MS recovery for PFHpS, FOSA and 8:2 FTS for 0861_QC104_231023 were greater than the upper data quality objective. LCS recovery for PFOS for 0861_SD050_231024 was not determined as the background level was greater than or equal to 4x spike level.

	• EB2333898 (soil): MS recovery for 0861_SD026_231024 for PFOS was not determined as the background level was greater than or equal to 4x spike level. • EB2337879 (soil): MS recovery for 0861_SD053_231129 for PFOS was not determined as the background level was greater than or equal to 4x spike level. This indicates that matrix interference may have occurred in the sample from SD026, SD050 and SD053. Review of the results for these samples did not indicate anomalies. This non-conformance is not expected to impact data quality.
Surrogate spike recovery	Surrogate spike recoveries were within control limits for all samples.
QA/QC Data Evaluation	
Comparison of Field Observations and Laboratory Results	No anomalous results between field observations and analysis results were noted.
Data transcription	A random 10% check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and tables generated by AECOM.
Limits of reporting	LORs were sufficiently low to enable assessment against adopted screening levels except for PFOS for NEMP (HEPA, 2020) ecological guideline values for the 99% protection of freshwater species. The potential exists for concentrations of PFOS to be above the adopted guideline, but below the laboratory LOR. This should be taken into consideration when interpreting and using this data quantitatively where results are reported below LOR. LORs in the following samples were raised due to matrix interference: • 0861_SW025_231026 (EB2333898-003) - PFBA • 0861_SW098_231026 (EB2333898-015) - PFBA • 0861_SD025_231026 (EB2333898-004) - PFHxS • 0861_SD039_231026 (EB2333898-008) - PFOS The following samples required dilution prior to analysis: • 0861_MW020_231028 (EB2333894-070). The sample required dilution due to the presence of high-level contaminants. • 0861_SD067_231129 (EB2337879-020). The sample required dilution due to the presence of high-level contaminants.
Field QA/QC RPDs	RPDs for sediment and water samples are reported in **Tables C3** and **C4** respectively. Field duplicate and triplicate RPDs were reported within control limits for all groundwater, surface water and sediment samples except the following (the sample with the higher concentration is in bold). • **0861_MW020_231028** and 0861_QC113_231028 for PFBA (65%) and PFHpS (36%) • **0861_MW020_231028** and 0861_QC213_231028 for PFBA (102%), PFHpS (56%), PFHpA (35%), PFPeS (31%) and PFOA (38%) • **0861_MW037_231023** and 0861_QC200_231023 for PFPeS (38%) and PFOS (60%) • 0861_MW047_231026 and **0861_QC210_231026** for PFHxS (30%). The RPD non-conformances are likely to be due to lack of mixing of samples and / or, different extraction techniques used by the primary and secondary laboratories. The elevated RPDs are not considered to affect data interpretation for use in this report. The higher concentration should be adopted in the data interpretation. All remaining samples reported within the control limits.
Other	
Other observations	No other key observations were identified in the field or laboratory datasets that could have a material implication on data interpretation and therefore decision-making on the project.

Table C1 Field Blank, Rinsate Blank and Trip Blank Analytical Results

	Lab Report	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2333894	EB2337879	EB2333894	EB2333894	EB2337879
	Field ID	0861_QC400_231023	0861_QC401_231024	0861_QC402_231025	0861_QC403_231026	0861_QC404_231027	0861_QC405_231030	0861_QC406_231129	0861_QC300_231023	0861_QC301_231024	0861_QC302_231025	0861_QC303_231026	0861_QC304_231027	0861_QC305_231030	0861_QC306_231129	0861_QC501_231031	0861_QC503_231031	0861_QC504_231129
	Sampled Date	23/10/2023	24/10/2023	25/10/2023	26/10/2023	27/10/2023	30/10/2023	29/11/2023	23/10/2023	24/10/2023	25/10/2023	26/10/2023	27/10/2023	30/10/2023	29/11/2023	31/10/2023	31/10/2023	29/11/2023
	Sample Type	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Trip Blank	Trip Blank	Trip Blank
Analyte	Units	EQL																
PFBS	µg/L	0.02	<0.02	<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
PFPeS	µg/L	0.02	<0.02	<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
PFHxS	µg/L	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
PFHpS	µg/L	0.02	<0.02	<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
PFOS	µg/L	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	<0.01	<0.01
PFDS	µg/L	0.02	<0.02	<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
PFBA	µg/L	0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PFPeA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFHxA	µg/L	0.02	<0.02	<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
PFHpA	µg/L	0.02	<0.02	<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
PFOA	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	<0.01
PFNA	µg/L	0.02	<0.02	<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
PFDA	µg/L	0.02	<0.02	<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
PFUnDA	µg/L	0.02	<0.02	<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
PFDoDA	µg/L	0.02	<0.02	<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
PFTrDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFTeDA	µg/L	0.05	<0.05	<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
FOSA	µg/L	0.02	<0.02	<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
MeFOSE	µg/L	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
EtFOSE	µg/L	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
MeFOSA	µg/L	0.05	<0.05	<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
EtFOSA	µg/L	0.05	<0.05	<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
MFOSAA	µg/L	0.02	<0.02	<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
EtFOSAA	µg/L	0.02	<0.02	<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
4:2 FTS	µg/L	0.05	<0.05	<0.01	<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
6:2 FTS	µg/L	0.05	<0.05	<0.01	<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
8:2 FTS	µg/L	0.05	<0.05	<0.01	<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
10:2 FTS	µg/L	0.05	<0.05	<0.01	<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

	Lab Report Number	EB2333894	EB2333894	EB2337879	
	Field ID	0861 QC501 231031	0861 QC503 231031	0861 QC505 231129	
	Sampled Date	31/10/2023	31/10/2023	29/11/2023	
	Sample Type	Trip Blank (Soil)	Trip Blank (Soil)	Trip Blank (Soil)	
Analyte	**Units**	**EQL**			
10:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
4:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
6:2 FtS	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
8:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
EtFOSA	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
EtFOSAA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
EtFOSE	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
MeFOSA	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
MFOSAA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
MeFOSE	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
PFBS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFBA	mg/kg	0.001	<0.001	<0.001	<0.001
PFDS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFDA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFDoDA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFHpS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFHpA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFHxA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFNA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
FOSA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFPeS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFPeA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFTeDA	mg/kg	0.0005	<0.0005	<0.0005	<0.0005
PFTrDA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFUnDA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
Sum of PFAS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
Sum of PFHxS and PFOS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFOS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFOA	mg/kg	0.0002	<0.0002	<0.0002	<0.0002
PFHxS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002

Table C3 Sediment Duplicate and Triplicate Analytical Results

	Lab Report Number	EB2333894	EB2333894		EB2333894	RN1410504		EB2333894	EB2333894		EB2333894	RN1410504		EB2333894	EB2333894		EB2333894	RN1410504	
	Field ID	0861_SD047_231023	0681_QC106_231023	**RPD**	0861_SD047_231023	0861_QC206_231023	**RPD**	0861_SD052_231023	0681_QC104_231023	**RPD**	0861_SD052_231023	0861_QC204_231023	**RPD**	0861_SD088_231023	0681_QC105_231023	**RPD**	0861_SD088_231023	0861- _QC205_231023	**RPD**
	Sampled Date	23/10/2023	23/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023	
	Sample Type	Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary	Triplicate	
Chemical Name	**Units**	**LOR**																	
PFBS	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFPeS	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFHxS	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFHpS	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFOS	mg/kg	0.0002 : 0.002 (Interlab)	0.0018	0.0014	25	0.0018	<0.002	0	<0.001	<0.0022	0	<0.001	<0.002	0	<0.0002	<0.0003	0	<0.0002	<0.002	0
PFDS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFBA	mg/kg	0.001	<0.001	<0.001	0	<0.001	<0.002	0	<0.001	<0.002	0	<0.001	<0.002	0	<0.001	<0.001	0	<0.001	<0.002	0
PFPeA	mg/kg	0.0002 : 0.002 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.001	<0.0002	0	<0.001	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFHxA	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFHpA	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFOA	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFNA	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFDA	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFUnDA	mg/kg	0.0002 : 0.002 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.001	<0.0002	0	<0.001	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFDoDA	mg/kg	0.0002 : 0.002 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.001	<0.0002	0	<0.001	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFTrDA	mg/kg	0.0002 : 0.002 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.001	<0.0002	0	<0.001	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFTeDA	mg/kg	0.0005 : 0.002 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0025	<0.0005	0	<0.0025	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0
FOSA	mg/kg	0.0002 : 0.001 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.001	<0.0002	0	<0.001	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
MeFOSE	mg/kg	0.0005 : 0.005 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0025	<0.0005	0	<0.0025	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
EtFOSE	mg/kg	0.0005 : 0.005 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0025	<0.0005	0	<0.0025	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
MeFOSA	mg/kg	0.0005 : 0.002 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0025	<0.0005	0	<0.0025	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0
EtFOSA	mg/kg	0.0005 : 0.002 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0025	<0.0005	0	<0.0025	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0
MFOSAA	mg/kg	0.0002 : 0.002 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.001	<0.0002	0	<0.001	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
EtFOSAA	mg/kg	0.0002 : 0.002 (Interlab)	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.001	<0.0002	0	<0.001	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
4:2 FTS	mg/kg	0.0005 : 0.001 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.001	<0.0005	0	<0.001	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0
6:2 FtS	mg/kg	0.0005 : 0.001 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.001	<0.0005	0	<0.001	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0
8:2 FTS	mg/kg	0.0005 : 0.001 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.001	<0.0005	0	<0.001	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0
10:2 FTS	mg/kg	0.0005 : 0.002 (Interlab)	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.001	<0.0005	0	<0.001	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0

Table C3 Sediment Duplicate and Triplicate Analytical Results

		EB2333894	EB2333894		EB2333894	RN1410504		EB2333894	EB2333894		EB2333894	RN1410504	
		0861_SD090_231023	0681_QC103_231023	RPD	0861_SD090_231023	0861_QC203_231023	RPD	0861_SD091_231023	0681_QC102_231023	RPD	0861_SD091_231023	0861_QC202_231023	RPD
		23/10/2023	23/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023	
		Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary	Triplicate	
Chemical Name	**Units**												
PFBS	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFPeS	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFHxS	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFHpS	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFOS	mg/kg	<0.0034	<0.0006	0	<0.0034	<0.002	0	<0.0006	<0.0004	0	<0.0006	<0.002	0
PFDS	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFBA	mg/kg	<0.001	<0.001	0	<0.001	<0.002	0	<0.001	<0.001	0	<0.001	<0.002	0
PFPeA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFHxA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFHpA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFOA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFNA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFDA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
PFUnDA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFDoDA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFTrDA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
PFTeDA	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0
FOSA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.0002	<0.0002	0	<0.0002	<0.001	0
MeFOSE	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
EtFOSE	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
MeFOSA	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0
EtFOSA	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0
MFOSAA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
EtFOSAA	mg/kg	<0.0002	<0.0002	0	<0.0002	<0.002	0	<0.0002	<0.0002	0	<0.0002	<0.002	0
4:2 FTS	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0
6:2 FtS	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0
8:2 FTS	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0
10:2 FTS	mg/kg	<0.0005	<0.0005	0	<0.0005	<0.002	0	<0.0005	<0.0005	0	<0.0005	<0.002	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C4 Groundwater Duplicate and Triplicate Analytical Results

	Lab Report Number	EB2333894	EB2333887-AA	RPD	EB2333894	RN1410504	RPD	EB2333894	EB2333894	RPD	EB2333894	RN1410504	RPD	EB2333894	EB2333894	RPD	EB2333894
	Field ID	0861_MW005_231028	0861_QC111_231028		0861_MW005_231028	0861_QC211_231028		0861_MW012_231028	0861_QC112_231028		0861_MW012_231028	0861_QC212_231027		0861_MW020_231028	0861_QC113_231028		0861_MW020_231028
	Sampled Date	30/10/2023	30/10/2023		30/10/2023	30/10/2023		30/10/2023	30/10/2023		30/10/2023	30/10/2023		30/10/2023	30/10/2023		30/10/2023
	Sample Type	Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary
Chemical Name	**Units**	**LOR**															
10:2 FTS	µg/L	0.05 : 0.01 (Interlab)	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.24	<0.05	0	<0.24
4:2 FTS	µg/L	0.05 : 0.01 (Interlab)	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.24	<0.05	0	<0.24
6:2 FtS	µg/L	0.05 : 0.01 (Interlab)	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	0.76	0.78	3	0.76
8:2 FTS	µg/L	0.05 : 0.01 (Interlab)	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.24	0.07	0	<0.24
EtFOSA	µg/L	0.05 : 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.59	<0.05	0	<0.59
EtFOSAA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	<0.02	0	<0.24
EtFOSE	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.59	<0.05	0	<0.59
MeFOSA	µg/L	0.05 : 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.59	<0.05	0	<0.59
MFOSAA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	<0.02	0	<0.24
MeFOSE	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.59	<0.05	0	<0.59
PFBS	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	4.2	3.67	13	4.2
PFBA	µg/L	0.1 : 0.05 (Interlab)	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	**4.9**	**2.5**	**65**	**4.9**
PFDS	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	<0.02	0	<0.24
PFDA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	0.06	0	<0.24
PFDoDA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	<0.02	0	<0.24
PFHpS	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	**3.39**	**2.35**	**36**	**3.39**
PFHpA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	3.86	3.87	0	**3.86**
PFHxA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	11.5	9.73	17	11.5
PFNA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	0.66	0.59	11	0.66
FOSA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	<0.02	0	<0.24
PFPeS	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	6	4.74	23	**6**
PFPeA	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	6.85	5.19	28	6.85
PFTeDA	µg/L	0.05 : 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.59	<0.05	0	<0.59
PFTrDA	µg/L	0.02	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.24	<0.02	0	<0.24
PFUnDA	µg/L	0.02 : 0.01 (Interlab)	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.24	<0.02	0	<0.24
PFOS	µg/L	0.01 : 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.02	0	<0.01	<0.01	0	<0.01	<0.02	0	97.7	79.6	20	97.7
PFOA	µg/L	0.01	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	6.16	4.78	25	**6.16**
PFHxS	µg/L	0.01	0.04	0.03	29	0.04	0.037	8	<0.01	<0.01	0	<0.01	<0.01	0	48.1	39	21	48.1

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C4 Groundwater Duplicate and Triplicate Analytical Results

		RN1410504	RPD	EB2333887-AA	EB2333887-AA	RPD	EB2333887-AA	RN1410504	RPD	EB2333887-AA	EB2333887-AA	RPD	EB2333887-AA	RN1410504	RPD	EB2333887-AA	EB2333887-AA	RPD
		0861_QC213_231023		0861_MW031_231023	0861_QC101_231023		0861_MW031_231023	0861_QC201_231023		0861_MW036_231024	0861_QC107_231023		0861_MW036_231024	0861_QC207_231023		0861_MW037_231023	0861_QC100_231023	
		30/10/2023		23/10/2023	23/10/2023		23/10/2023	23/10/2023		24/10/2023	24/10/2023		24/10/2023	24/10/2023		23/10/2023	23/10/2023	
		Triplicate		Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary	Triplicate		Primary	Duplicate	
Chemical Name	**Units**																	
10:2 FTS	µg/L	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
4:2 FTS	µg/L	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
6:2 FtS	µg/L	0.68	11	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
8:2 FTS	µg/L	0.079	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0
EtFOSA	µg/L	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0
EtFOSAA	µg/L	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
EtFOSE	µg/L	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
MeFOSA	µg/L	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0
MFOSAA	µg/L	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
MeFOSE	µg/L	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
PFBS	µg/L	3.5	18	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	2.32	2.38	3
PFBA	µg/L	**1.6**	**102**	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	0.2	0.6	100
PFDS	µg/L	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
PFDA	µg/L	0.058	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
PFDoDA	µg/L	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
PFHpS	µg/L	**1.9**	**56**	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	0.05	0.06	18
PFHpA	µg/L	**2.7**	**35**	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	0.18	0.22	20
PFHxA	µg/L	9	24	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	1.68	1.76	5
PFNA	µg/L	0.63	5	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
FOSA	µg/L	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
PFPeS	µg/L	**4.4**	**31**	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	2.2	2.29	4
PFPeA	µg/L	5.4	24	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	0.35	0.36	3
PFTeDA	µg/L	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0
PFTrDA	µg/L	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0
PFUnDA	µg/L	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0
PFOS	µg/L	80	20	<0.01	<0.01	0	<0.01	<0.02	0	<0.01	0.01	0	<0.01	<0.02	0	0.61	0.5	20
PFOA	µg/L	**4.2**	**38**	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	0.09	0.11	20
PFHxS	µg/L	37	26	<0.01	<0.01	0	<0.01	<0.01	0	0.03	<0.01	100	0.03	0.02	40	5.33	6.4	18

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C4 Groundwater Duplicate and Triplicate Analytical Results

		EB2333887-AA	RN1410504		EB2333887-AA	EB2333887-AA		EB2333887-AA	EB2333887-AA		EB2333887-AA	RN1410504		EB2333887-AA	EB2333887-AA		EB2333887-AA	RN1410504	
		0861_MW037_231023	0861_QC200_231023	RPD	0861_MW044_231024	0861_QC108_231024	RPD	0861_MW047_231026	0861_QC110_231026	RPD	0861_MW047_231026	0861_QC210_231026	RPD	0861_MW048_231026	0861_QC109_231026	RPD	0861_MW048_231026	0861_QC209_231026	RPD
		23/10/2023	23/10/2023		24/10/2023	24/10/2023		26/10/2023	26/10/2023		26/10/2023	26/10/2023		26/10/2023	26/10/2023		26/10/2023	26/10/2023	
		Primary	Triplicate		Primary	Duplicate		Primary	Duplicate		Primary	Triplicate		Primary	Duplicate		Primary	Triplicate	
Chemical Name	**Units**																		
10:2 FTS	µg/L	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
4:2 FTS	µg/L	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
6:2 FtS	µg/L	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
8:2 FTS	µg/L	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
EtFOSA	µg/L	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0
EtFOSAA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
EtFOSE	µg/L	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
MeFOSA	µg/L	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0
MFOSAA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
MeFOSE	µg/L	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
PFBS	µg/L	2.32	2.1	10	<0.03	<0.02	0	<0.07	0.06	0	<0.07	0.048	0	0.48	0.44	9	0.48	0.43	11
PFBA	µg/L	0.2	0.35	55	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	0.1	0	<0.1	0.13	26
PFDS	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
PFDA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
PFDoDA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
PFHpS	µg/L	0.05	0.037	30	<0.02	<0.02	0	0.03	0.04	29	0.03	0.03	0	0.16	0.19	17	0.16	0.12	29
PFHpA	µg/L	0.18	0.21	15	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	0.08	0.08	0	0.08	0.063	24
PFHxA	µg/L	1.68	2	17	<0.02	<0.02	0	0.03	<0.02	40	0.03	0.032	6	0.52	0.49	6	0.52	0.46	12
PFNA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
FOSA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
PFPeS	µg/L	**2.2**	**1.5**	**38**	<0.02	<0.02	0	0.05	0.05	0	0.05	0.046	8	0.5	0.53	6	0.5	0.37	30
PFPeA	µg/L	0.35	0.41	16	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	0.14	0.15	7	0.14	0.14	0
PFTeDA	µg/L	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.02	0	<0.05	<0.05	0	<0.05	<0.02	0
PFTrDA	µg/L	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0
PFUnDA	µg/L	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
PFOS	µg/L	**0.61**	**0.33**	**60**	<0.02	<0.01	0	0.68	0.84	21	0.68	0.81	17	5.62	6.52	15	5.62	4.8	16
PFOA	µg/L	0.09	0.084	7	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	0.15	0.1	40	0.15	0.11	31
PFHxS	µg/L	5.33	6.4	18	<0.02	0.02	0	0.42	0.51	19	**0.42**	**0.57**	**30**	3.43	3.53	3	3.43	2.7	24

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Appendix D

Chain of Custody Forms

Appendix D Chain of Custody Forms

AECOM — **Chain of Custody** — COC Page 1 of 13

AECOM Australia Pty Ltd		**Laboratory Details**	Tel:
[redacted]	Email reports to: [redacted]	Lab. Name	Fax:
		Lab. Address	Preliminary Report by:
		Contact Name:	Final Report by:
		Lab. Ref:	Lab Quote No: SY/139/19

Sampled By: AECOM **Project Name:** QLD 0861_PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no.: [redacted]

Specifications: Please report in ESdat format	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM S 1.1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: frzn	ice	no	other	Container: 250 & 500ml	Analysis Request: PFAS (PFAS SM 3B)															None
1	0861_MW002_231023	23/10/2023		X				X			X															
SNR	0861_MW005_231027	27/10/2023		X				X			X															
SNR	0861_MW012_231027	27/10/2023		X				X			X															
SNR	0861_MW020_231027	27/10/2023		X				X			X															
5	0861_MW021_231027	27/10/2023		X				X			X															
6	0861_MW022_231025	25/10/2023		X				X			X															
7	0861_MW024_231024	24/10/2023		X				X			X															
SNR	0861_MW025_231027	27/10/2023		X				X			X															
9	0861_MW026_231027	27/10/2023		X				X			X															
10	0861_MW028_231025	25/10/2023		X				X			X															
11	0861_MW029_231025	25/10/2023		X				X			X															

Environmental Division Brisbane
Work Order Reference
EB2333887

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME	Temp. received: °C	Report & Invoice: [redacted]	
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Received by: [redacted]	Signed:	Date:	Received by: Signed: Date:

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Chain of Custody

COC
Page 2 of 13

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details
Lab Name
Lab Address
Contact Name
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SYD39019

Sampled By: AECOM **Project Name:** QLD 0961 PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in EDaI format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Field TAT Guideline Required?	
3. Is any sediment layer present in waters to be included from extractions?	
4. Are extraneous matters removed from samples by air injected as per NEPM S.1.17	
5. Special storage requirements? (details: _____ _____)	
6. Report Format: EDaI	7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: filter	Preservation: acid	Preservation: ice	Preservation: other	Container (tick & type)	PFAS Std 28	HOLD	Notes
12	0861_MW030_231023	23/10/2023		X				X			X		
13	0861_MW309_231027	27/10/2023		X				X			X		
14	0861_MW031_231023	23/10/2023		X				X			X		
15	0861_MW032_231027	27/10/2023		X				X			X		
16	0861_MW033_231027	27/10/2023		X				X			X		
17	0861_MW034_231023	23/10/2023		X				X			X		
18	0861_MW035_231024	24/10/2023		X				X			X		
19	0861_MW036_231024	24/10/2023		X				X			X		
20	0861_MW037_231023	23/10/2023		X				X			X		
21	0861_MW041_231030	30/10/2023		X				X			X		
22	0861_MW042_231030	30/10/2023		X				X			X		
23	0861_MW043_231030	30/10/2023		X				X			X		
24	0861_MW044_231024	24/10/2023		X				X			X		
25	0861_MW046_231027	27/10/2023		X				X			X		

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Lab Report: Y/N

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Relinquished by:	Signed:	Date:	
Received by:	Signed:	Date:	

AECOM — Chain of Custody — COC Page 3 of 13

AECOM Australia Pty Ltd
[redacted]
Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY130619

Sampled By: AECOM
Mobile no.: [redacted]
Project Name: QLD_0861_PFASOMP_23
AECOM Project #: 60612563 3.1
Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be extracted from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM S 1 1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	soil	Preservation: HCl	soil	ice	other	Container (No. & type)	Analysis Request: EP231K (PFAS Std 28)								HOLD	Notes
26	0861_MW047_231026	26/10/2023		X				X			X									
27	0861_MW048_231026	26/10/2023		X				X			X									
SNR	0861_MW050_231027	27/10/2023		X				X			X									
29	0861_MW055S_231024	24/10/2023		X				X			X									
30	0861_MW055D_231024	24/10/2023		X				X			X									
31	QC100_231023	23/10/2023		X				X			X									
–	QC200_231023	23/10/2023		X				X			X									Forward to NMI
33	QC101_231023	23/10/2023		X				X			X									
–	QC201_231023	23/10/2023		X				X			X									Forward to NMI
35	QC107_231023	23/10/2023		X				X			X									
–	QC207_231023	23/10/2023		X				X			X									Forward to NMI
37	QC111_231028	28/10/2023		X				X			X									
–	QC211_231028	28/10/2023		X				X			X									Forward to NMI

Comments: Please send ESdat files to OERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

TAMS retained: °C

Report & Invoice: [redacted]

Relinquished by	Signed	Date:	Relinquished by:	Signed	Date
Received by	Signed:	Date	Received by:	Signed:	Date

[redacted]

AECOM

Chain of Custody

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AECOM Australia Pty Ltd	**Laboratory Details**
[redacted]	Lab. Name:
Email reports to: [redacted]	Lab. Address:
	Contact Name:
	Lab. Ref:
	Tel.:
	Fax:
	Preliminary Report by:
	Final Report by:
	Lab Quote No: ST139718

Sampled By: AECOM **Project Name:** QLD 0861 PFASOMP 23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM B ' 1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat 7. Project Manager: [redacted]	

Lab ID	Sample ID	Sampling Date	Matrix			Preservation				Container (no & type)	Analysis Request: EP233A (PFAS Suite 26)										Notes
			soil	water	sed	frac	acid	ice	other												
39	0861_SW002_231027	27/10/2023		X				X			X										
40	0861_SW004_231025	25/10/2023		X				X			X										
41	0861_SW005_231025	25/10/2023		X				X			X										
42	0861_SW008_231025	25/10/2023		X				X			X										
43	0861_SW009_231025	25/10/2023		X				X			X										
44	0861_SW011_231024	24/10/2023		X				X			X										
45	0861_SW015_231025	25/10/2023		X				X			X										
46	0861_SW016_231025	25/10/2023		X				X			X										
47	0861_SW018_231025	25/10/2023		X				X			X										
48	0861_SW020_231025	25/10/2023		X				X			X										

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Received by:	Signed:	Date:	Received by:	Signed	Date

[redacted]

AECOM

Chain of Custody

COC Page 5 of 13

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab Name:
Lab Address:
Contact Name:
Lab Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY130719

Sampled By: AECOM **Project Name:** QLD_0861_PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	

6. Report Format: ESdat 7. Project Manager: [redacted]

Analysis Request

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container (No. & type)	EP232x (PFAS 533.2)	HOLD	None
49	0861_SW028_231025	25/10/2023		X				X			X		
50	0861_SW030_231024	24/10/2023		X				X			X		
51	0861_SW034_231025	25/10/2023		X				X			X		
52	0861_SW036_231024	24/10/2023		X				X			X		
53	0861_SW037_231027	27/10/2023		X				X			X		
54	0861_SW047_231023	23/10/2023		X				X			X		

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Received by	Signed:	Date:	Received by	Signed:	Date:

AECOM

Chain of Custody

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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name

Lab. Address

Contact Name

Lab. Ref

Tel:

Fax:

Preliminary Report by:

Final Report by:

Lab Quote No: SYM30019

Sampled By: AECOM **Project Name:** DLO_0861_PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no: [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat / Project Manager: [redacted]	

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container (no. & type)	Analysis Request: PFAS (PFAS SUITE)									HOLD	Notes
			soil	water	soil	Nitric	Acetic	Ice	Other												
55	0861_SW048_231027	27/10/2023		X				X			X										
SNK	0861_SW049_231023	23/10/2023		X				X			X										
57	0861_SW050_231024	24/10/2023		X				X			X										
58	0861_SW051_231024	24/10/2023		X				X			X										
59	0861_SW056_231024	24/10/2023		X				X			X										
60	0861_SW059_231027	27/10/2023		X				X			X										
61	0861_SW076_231027	27/10/2023		X				X			X										
62	0861_SW088_231023	23/10/2023		X				X			X										

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & invoice: [redacted]

Relinquished by	Signed	Date	Relinquished by	Signed	Date
Received by	Signed	Date	Received by	Signed:	Date

[redacted]

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Chain of Custody

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AECOM Australia Pty Ltd

[redacted]

Email report to: [redacted]

Laboratory Details

Lab Name:
Lab. Address:
Contact Name:
Lab Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY139419

Sampled By: AECOM **Project Name:** QLD_0861_PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no [redacted]

Specifications: Pease report in ESdat format	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix: Water	Preservation: Unpres	Container (No & type)	Analysis Request: PFAS (PFAS Suite 28)	HOLD	Notes
63	0861_SW089_231023	23/10/2023	X	X		X		
64	0861_SW090_231023	23/10/2023	X	X		X		
65	0861_SW094_231024	24/10/2023	X	X		X		
66	0861_SW099_231024	24/10/2023	X	X		X		
67	0861_SW100_231024	24/10/2023	X	X		X		
68	QC108_231024	24/10/2023	X	X		X		
—	QC108_231024	24/10/2023	X	X		X		Forward to NMI
70	QC109_231026	26/10/2023	X	X		X		
—	QC209_231026	26/10/2023	X	X		X		Forward to NMI
72	QC110_231026	26/10/2023	X	X		X		
—	QC210_231026	26/10/2023	X	X		X		Forward to NMI

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & Invoice [redacted]

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Received by: [redacted]	Signed	Date	Received by:	Signed	Date

AECOM

Chain of Custody

COC Page 8 of 13

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY139919

Sampled By: AECOM **Project Name:** QLD_0861_PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no.: [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in wells to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM S 1.1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat	7. Project Manager: James Peachey

Analysis Request

Notes

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	solid	Preservation: none	acid	ice	other	Container / No. & type	PFAS (PFAS Suite 1)	HOLD
1	0861_SD002_231027	27/10/2023			X			X			X	
2	0861_SD003_231027	27/10/2023			X			X			X	
SMR	0861_SD004_231025	25/10/2023			X			X			X	
4	0861_SD005_231025	25/10/2023			X			X			X	
5	0861_SD006_231025	25/10/2023			X			X			X	
6	0861_SD009_231025	25/10/2023			X			X			X	
7	0861_SD011_231024	24/10/2023			X			X			X	
8	0861_SD015_231025	25/10/2023			X			X			X	
9	0861_SD016_231025	25/10/2023			X			X			X	
10	0861_SD018_231025	25/10/2023			X			X			X	
11	0861_SD020_231025	25/10/2023			X			X			X	
12	0861_SD021_231023	23/10/2023			X			X			X	

SCANNED

Environmental Division
Brisbane
Work Order Reference
EB2333894

[redacted]

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Received by: [redacted]	Signed:	Date:	Received by	Signed	Date

AECOM

Chain of Custody

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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab Name:

Lab Address:

Contact Name:

Lab Ref:

Tel:

Fax:

Preliminary Report by:

Final Report by:

Lab Quote No: SY/139/19

Sampled By: AECOM **Project Name:** QLD 0861 PFASOMP 23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be extracted from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1 ?	
5. Special storage requirements? (detail:- _____)	

6. Report Format: ESdat 7. Project Manager: [redacted]

Lab. ID	Sample ID	Sample Date	Matrix			Preservation				Container	Analysis Request: EP231X (PFAS Suite 26)								HOLD	Notes
			soil	solid	soil	Unpres	Acid	Ice	other	per Analysis										
13	0861_SD027_231024	24/10/2023			X			X			X									
14	0861_SD028_231025	25/10/2023			X			X			X									
15	0861_SD030_231024	24/10/2023			X			X			X									
16	0861_SD033_231030	30/10/2023			X			X			X									
17	0861_SD034_231025	25/10/2023			X			X			X									
18	0861_SD036_231024	24/10/2023			X			X			X									
19	0861_SD037_231027	27/10/2023			X			X			X									
20	0861_SD041_231024	24/10/2023			X			X			X									
21	0861_SD047_231023	23/10/2023			X			X			X									

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Report & Invoice: [redacted]

Relinquished by:	Signed:	Date:	Relinquished by	Signed	Date:
Received by: [redacted]	Signed	Date:	Received by:	Signed	Date

AECOM

Chain of Custody

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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SYD 38919

Sampled By: AECOM
Mobile no. [redacted]

Project Name: QLD_0861_PFASOMP_23

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1 1?	
5. Special storage requirements? (details: _____)	

6. Report Format: ESdat

7. Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: Chilled	Acid	Ice	other	Container: No & type	Analysis Request: EP231K PFAS Soil 28	TOC	Notes
22	0861_SD048_231027	27/10/2023			X			X			X		
SN2	0861_SD049_231023	23/10/2023			X			X			X		
24	0861_SD050_231024	24/10/2023			X			X			X		
25	0861_SD061_231024	24/10/2023			X			X			X		
26	0861_SD052_231023	23/10/2023			X			X			X		
27	0861_SD056_231024	24/10/2023			X			X			X		
28	0861_SD059_231027	27/10/2023			X			X			X		
29	0861_SD076_231027	27/10/2023			X			X			X		
30	0861_SD088_231023	23/10/2023			X			X			X		

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Report & Invoice: [redacted]

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Chain of Custody

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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref.

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY139913

Sampled By: AECOM **Project Name:** QLD 0861 PFASOMP 23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle) 24hr 48hr 5 days	
2. Fast TAT Guarantee Required?	
3. Is any additional layer present in waste to be analysed from excavations?	
4. Is asbestos material removed from samples to be reported as per NEPM 5.4.1?	
5. Special storage requirements? (details: _____)	

6. Report Format: ESdat 7. Project Manager: [redacted]

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: Iced	acid	ice	other	Container: No. & type	Analysis Request: EP231X PFAS Sed 20; HOLD	Notes
31	0861_SD089_231023	23/10/2023			X			X			X	
32	0861_SD090_231023	23/10/2023			X			X			X	
33	0861_SD091_231023	23/10/2023			X			X			X	
34	0861_SD094_231024	24/10/2023			X			X			X	
35	0861_SD099_231024	24/10/2023			X			X			X	
36	0861_SD100_231024	24/10/2023			X			X			X	
37	QC102_231023	23/10/2023			X			X			X	
—	QC202_231023	23/10/2023			X			X			X	FORWARD TO NMI
39	QC103_231023	23/10/2023			X			X			X	
—	QC203_231023	23/10/2023			X			X			X	FORWARD TO NMI
41	QC104_231023	23/10/2023			X			X			X	
—	QC204_231023	23/10/2023			X			X			X	FORWARD TO NMI
43	QC105_231023	23/10/2023			X			X			X	
—	QC205_231023	23/10/2023			X			X			X	FORWARD TO NMI

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Received by: Signed: Date:

AECOM

Chain of Custody

COC
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AECOM Australia Pty Ltd
[redacted]

Email reports to: [redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No:

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: QLD_0961_PFASOMP_23

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1 Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2 Fast TAT Guarantee Required?	
3 Is any sediment layer present in waters to be excluded from extractions?	
4 % soil/sediment to be reported as per NEPM 5.1?	
5 Special storage requirements? (details:)	

6 Report Format: ESdat

7. Project Manager: [redacted]

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	wipe	Preservation: filtered	field	ice	other	Containers (No & size)	Analysis Request: PFAS Suite									Notes
45	QC106_231023	23/10/2023			X			X			X									
—	QC206_231023	23/10/2023			X			X			X									FORWARD TO NMI
47	QC300_231023	23/10/2023		X				X			X									
48	QC400_231023	23/10/2023		X				X			X									
49	QC301_231024	24/10/2023		X				X			X									
50	QC401_231024	24/10/2023		X				X			X									
51	QC302_231025	25/10/2023		X				X			X									
52	QC402_231025	25/10/2023		X				X			X									
53	QC303_231026	26/10/2023		X				X			X									
54	QC403_231026	26/10/2023		X				X			X									
SNR	QC112_231027	27/10/2023		X				X			X									
—	QC212_231027	27/10/2023		X				X			X									FORWARD TO NMI
54	QC304_231027	27/10/2023		X				X			X									
55	QC404_231027	27/10/2023		X				X			X									

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Report & Invoice: [redacted]

For Report (Date)

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Received by: [redacted]	Signed:	Date:	Received by:	Signed:	Date:

AECOM

Chain of Custody

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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab Name:
Lab. Address:
Contact Name:
Lab. Ref:

Ref
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY139019

Sampled By: AECOM
Mobile no. [redacted]

Project Name: QLD_0881_PFASOMP 23
AECOM Project #: 60612563 3.1
Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required	
3. Is any submitted soil/ sediment/ waters to be analysed from outside NSW?	
4. Is garrigeous material removed from samples to be reported as per NEPM 5.1 ?	
5. Special storage requirements? (details)	
6. Report Format: ESdat. 7. Project Manager: [redacted]	

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: ice	acid	ice	other	Container: no. & type	Analysis Request: EP233 (PFAS Sec B)	TRIP BLANK (W)	TRIP BLANK (S)							HOLD	Notes
SNR	QC113_231027	27/10/2023		X				X			X										
	QC213_231023	27/10/2023		X				X			X										FORWARD TO NMI
61	QC305_231030	30/10/2023		X				X			X										
62	QC405_231030	30/10/2023		X				X			X										
63	QC500	30/10/202		X				X				X									
64	QC501	30/10/2023	X										X								
65	QC502	30/10/202		X				X				X									
66	QC503	30/10/2023	X										X								

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Chain of Custody

COC
Page 1 of 1

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name
Lab. Address:
Contact Name
Lab. Ref.

Tel
Fax
Preliminary Report by
Final Report by
Lab Quote No: SV105/19

Sampled By: AECOM **Project Name:** QLD_GM1_PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format.

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Post TAT QA monitor Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1.7?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analyse Request

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: filtered	unfil	ice	other	Container (No & type)	PFAS (QSM 5.3 Table B-15)	Metals	Notes
	0861_MW054S_231026	26/10/2023		X				X			X		
	0861_MW054D_231026	26/10/2023		X				X			X		

Environmental Division
Brisbane
Work Order Reference
EB2333895

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Report & invoice [redacted]

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Received by: [redacted]	Signed:	Date	Received by:	Signed	Date:

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AECOM Australia Pty Ltd
[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY/139/19

Sampled By: AECOM | **Project Name:** QLD 0861 PFASOMP_23 | **AECOM Project #:** 60612563 3.1 | **Purchase Order No:** 60612563 3.1

Mobile no.: [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % actual/pure material removed from samples to be reported as per NEPM 6 - 12	
5. Special storage requirements? (details: _____ _____)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix: water	Matrix: soil	Preservation: ice	Container (No. & type)	EP231x (PFAS Std 28)
1	0861_MW056S_231026	26/10/2023	X		X		X
DUP 2	0861_MW056D_231026	26/10/2023	X		X		X
3	0861_SW025_231026	26/10/2023	X		X		X
4	0861_SD025_231026	26/10/2023		X	X		X
5	0861_SW026_231024	24/10/2023	X		X		X
6	0861_SD026_231024	24/10/2023		X	X		X
7	0861_SW039_231026	26/10/2023	X		X		X
8	0861_SD039_231026	26/10/2023		X	X		X
9	0861_SW040_231026	26/10/2023	X		X		X
10	0861_SD040_231026	26/10/2023		X	X		X
11	0861_SW043_231026	26/10/2023	X		X		X
12	0861_SD043_231026	26/10/2023		X	X		X

Notes

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Environmental Division
Brisbane
Work Order Reference
EB2333898

[redacted]

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & Invoice: [redacted]

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Chain of Custody

COC Page 1 of 2

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY139015

Sampled By: AECOM **Project Name:** QLD 0861 PFASOMP_23 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no: [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported As per NEPM 5.1.12	
5. Special storage requirements? (details: _____)	

6. Report Format: ESdat 7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: filtered	Preservation: acid	Preservation: ice	Preservation: other	Container (No. & type)	EP231A (PFAS Suite B)	HOLD	Notes
13	0861_SW045_231026	26/10/2023		X				X			X		
14	0861_SD045_231026	26/10/2023			X			X			X		
15	0861_SW096_231026	26/10/2023		X				X			X		
16	0861_SD098_231026	26/10/2023			X			X			X		

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & invoice: [redacted]

Relinquished by: [redacted]	Signed	Date:	Relinquished by	Signed	Date:
Received by:	Signed	Date:	Received by	Signed	Date:

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Chain of Custody

COC Page 1 of 2

[redacted]

Email results to: [redacted]

Laboratory Details

Lab Name:
Lab Address:
Contact Name:
Lab Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SQ13259

Sampled By: [redacted]
Mobile no.: [redacted]

Project Name: DLD_GBR_PFASOMP_23

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (circle)
1. Urgent TAT required? (please circle 24hr 48hr 5 days)	
2. Test TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % of bituminous material to be reported as per NEPM 2013?	
5. Special clarification required? (How to)	

6. Report Format: ESdat

7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampled Date	Matrix			Preservation				Containers (# & type)	EP231S PFAS 500 (SI)	HOLD	Notes
	0861_MW006_231129	29/11/2023		X				X			X		
	0861_MW007_231129	29/11/2023		X				X			X		
	0861_MW023_231129	29/11/2023		X				X			X		
	0861_SW003_231129	29/11/2023		X				X			X		
	0861_SW021_231129	29/11/2023		X				X			X		
	0861_SW027_231129	29/11/2023		X				X			X		
	0861_SW033_231129	29/11/2023		X				X			X		
	0861_SW038_231129	29/11/2023		X				X			X		
	0861_SW041_231129	29/11/2023		X				X			X		
	0861_SW053_231129	29/11/2023		X				X			X		
	0861_SW064_231129	29/11/2023		X				X			X		

Environmental Division
Brisbane
Work Order Reference
EB2337879

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the file is set for PROJECT NAME

Samples received: [redacted]

Report & Invoice: [redacted]

Relinquished by: [redacted]	Signed:	Date: 29/11/23	Relinquished by	Signed:	Date:
Received by: [redacted]	Signed:	Date: 30/11/23	Received by	Signed:	Date:

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Chain of Custody

COC
Page 2 of 2

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref.:

Tel:
Fax:
Preliminary Reports by:
Final Reports by:
Lab Quote No: SY136618

Sampled By: [redacted]
Mobile no.: [redacted]

Project Name: QLD 0861 PFASOMP 23

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

Requested

1. Urgent TAT required? (please circle: 24hr 48hr 5 days)
2. Full TAT Customised Report?
3. Are any additional tests present in soils to be excluded from normalisation?
4. Is gravimetric data required for soils to be reported as per NEPM Sch B1?
5. Special sample instructions/QC required:
6. Report Format: PDF
7. Project Manager: [redacted]

Analysis Required

Lab ID	Sample ID	Sampling Date	Matrix: Water	Matrix: Soil	Preservation: Ice	Preservation: Other	Container: Glass	Container: Plastic	Container: VOA	Container: Other	PFAS (28 PFAS suite)	TRH PFAS suite (%)	PFAS (4 PFAS suite)	1,4-D	Notes
[redacted]	0861_SW067_231129	29/11/2023		X			X				X				
[redacted]	0861_SW079_231129	29/11/2023		X			X				X				
[redacted]	0861_SW080_231129	29/11/2023		X			X				X				
[redacted]	QC306_231129	29/11/2023		X			X				X				
[redacted]	QC408_231129	29/11/2023		X			X				X				
[redacted]	0861_SD038_231129	29/11/2023			X		X				X				
[redacted]	0861_SD063_231129	29/11/2023			X		X				X				
[redacted]	0861_SD064_231129	29/11/2023			X		X				X				
[redacted]	0861_SD067_231129	29/11/2023			X		X				X				
[redacted]	0861_SD079_231129	29/11/2023			X		X				X				
[redacted]	0861_SD080_231129	29/11/2023			X		X				X				
[redacted]	QC504_231129	29/11/2023		X								X			
[redacted]	QC505_231129	29/11/2023			X								X		

Comments: Please send ESdat files to DERP.labreports@eadal.com.au and ensure that the files use the PROJECT NAME

Temp. received: [redacted]

Report & Invoice: [redacted]

Relinquished by: [redacted] Signed: [redacted] Date: 29/11/23 Time: [redacted]

Received by: [redacted] Signed: [redacted] Date: 30/11/23

Relinquished by: Signed: Date:

Received by: Signed: Date:

0930

AECOM

Chain of Custody

COC Page 1 of 1

[redacted]

Email results to: [redacted]

Laboratory Details

Lab Name:
Lab Address:
Contact Name:
Lab Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: S*1139*9

Sampled By: [redacted]
Mobile no. [redacted]

Project Name: QLD_0861 PFASOMP_23

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is dechlorinator required in samples to be analysed as per NEPM 5.1.1?	
5. Special QA requirements? If yes, list:	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Required

Lab. ID	Sample ID	Sampling Date	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Preservation: Frozen	Preservation: Other	Container (No & Type)	EP231x (PFAS 5ml 28)	TOP
[redacted]	0861_MW057S_231129	29/11/2023		X				X			X	
[redacted]	0861_MW057D_231129	29/11/2023		X				X			X	

Comments: Please send ESdat files to BERP.labreports@esdat.com.au and ensure that [redacted]

Temperature on Receipt: °C

Report & Invoice to: [redacted]

Relinquished by: [redacted] Signed: [redacted] Date: 29/11/23

Received by: [redacted] Signed: [redacted] Date: 30/11/23

Relinquished by: Signed: Date:

Received by: Signed: Date:

0930

Appendix E

Laboratory Analytical Certificates and QA / QC Reports

Appendix E Laboratory Analytical Certificates and QA / QC Reports

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EB2337879**		
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	[redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Page	: 1 of 3
Order number	: 60612563 3.1	Quote number	: ES2020AECOMAU0024 (SY/139/19 V3_QLD)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 30-Nov-2023 09:30	Issue Date	: 14-Dec-2023
Client Requested Due Date	: 11-Dec-2023	Scheduled Reporting Date	: **11-Dec-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 2.0°C - Ice present
Receipt Detail	: MEDIUM ESKY	No. of samples received / analysed	: 25 / 25

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 be advised, no sample was received for sample "0861_SW041_231129" and has been denoted SNR on the scanned Chain of Custody. For further information regarding this adjustment, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- ***SRN Reissued 12/12/2023: As per the email from [redacted] on 12.12.23 this work order has been amended to split the COA, and update sample IDs for #15, #16, #23, and #23**
- ***SRN Reissued 14.12.23: As per the email from [redacted] on 14.12.23 this work order has been amended to change sample ID name from 0861_MW057D_231129 to be updated to 0861_MW057I_231129**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Any sample identifications that cannot be displayed entirely in the analysis summary table will be listed below.

EB2337879-023 : [29-Nov-2023] : 0861_QC504_231129 - 131019
EB2337879-024 : [29-Nov-2023] : 0861_QC505_231129 - 101316

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 (28 analytes)
EB2337879-017	29-Nov-2023 00:00	0861_SD038_231129	✓	✓
EB2337879-018	29-Nov-2023 00:00	0861_SD053_231129	✓	✓
EB2337879-019	29-Nov-2023 00:00	0861_SD064_231129	✓	✓
EB2337879-020	29-Nov-2023 00:00	0861_SD067_231129	✓	✓
EB2337879-021	29-Nov-2023 00:00	0861_SD079_231129	✓	✓
EB2337879-022	29-Nov-2023 00:00	0861_SD080_231129	✓	✓
EB2337879-024	29-Nov-2023 00:00	0861_QC505_231129 1...	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (28 analytes)
EB2337879-001	29-Nov-2023 00:00	0861_MW006_231129	✓
EB2337879-002	29-Nov-2023 00:00	0861_MW007_231129	✓
EB2337879-003	29-Nov-2023 00:00	0861_MW023_231129	✓
EB2337879-004	29-Nov-2023 00:00	0861_SW003_231129	✓
EB2337879-005	29-Nov-2023 00:00	0861_SW021_231129	✓
EB2337879-006	29-Nov-2023 00:00	0861_SW027_231129	✓
EB2337879-007	29-Nov-2023 00:00	0861_SW033_231129	✓
EB2337879-008	29-Nov-2023 00:00	0861_SW038_231129	✓
EB2337879-010	29-Nov-2023 00:00	0861_SW053_231129	✓
EB2337879-011	29-Nov-2023 00:00	0861_SW064_231129	✓
EB2337879-012	29-Nov-2023 00:00	0861_SW067_231129	✓
EB2337879-013	29-Nov-2023 00:00	0861_SW079_231129	✓
EB2337879-014	29-Nov-2023 00:00	0861_SW080_231129	✓
EB2337879-015	29-Nov-2023 00:00	0861_QC306_231129	✓

			WATER - EP231X PFAS - Full Suite (28 analytes)
EB2337879-016	29-Nov-2023 00:00	0861_QC406_231129	✓
EB2337879-023	29-Nov-2023 00:00	0861_QC504_231129 1...	✓
EB2337879-025	29-Nov-2023 00:00	0861_MW057S_231129	✓
EB2337879-026	29-Nov-2023 00:00	0861_MW057I_231129	✓

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 AP_CustomerService.ANZ@aecom.com

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

DERP ESDAT REPORTS

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

CERTIFICATE OF ANALYSIS

Work Order	: **EB2337879-AA**	Page	: 1 of 15
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 30-Nov-2023 09:30
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Dec-2023
C-O-C number	: ----	Issue Date	: 14-Dec-2023 11:51
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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 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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Soil Preparation, Stafford, QLD

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 (14.12.23): This report has been amended following email from [redacted] on 14.12.23 requesting Sample ID 0861_MW057D_231129 be updated to 0861_MW057I_231129.
- EP231X- PFAS: Sample '0861_SD067_231129' (EB2337879-020) required dilution due to the presence of high-level contaminants. LOR values have been adjusted accordingly. Surrogate recoveries were not determined.
- EP231X- PFAS: Particular samples required dilution due to the presence of high-level contaminants. LOR values have been adjusted accordingly. The LOR for particular analytes has been raised further due to matrix interference.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD038_231129	0861_SD053_231129	0861_SD064_231129	0861_SD067_231129	0861_SD079_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-017	EB2337879-018	EB2337879-019	EB2337879-020	EB2337879-021
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**87.7**	**52.8**	**73.2**	**82.1**	**80.5**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	**0.0005**	**0.0014**	**0.0094**	<0.0012
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	**0.0003**	<0.0014	**0.0110**	<0.0016
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	**0.0024**	**0.0126**	**0.126**	**0.0218**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	**0.0013**	**0.0094**	**0.0042**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0019**	**0.0129**	**0.219**	**1.28**	**0.438**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	**0.0026**	**0.0204**	**0.0052**
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.001	<0.002	<0.025	<0.006
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	**0.0014**	**0.0127**	**0.0022**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0006	**0.0002**	**0.0011**	**0.0220**	**0.0029**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0049	<0.0012
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	**0.0010**	**0.0099**	**0.0018**
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0049	<0.0012
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	**0.0066**	<0.0012
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0008	**0.0121**	<0.0012
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	**0.0002**	**0.0010**	**0.0281**	**0.0028**
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	**0.0088**	<0.0012
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0006	<0.0005	<0.0012	<0.0123	<0.0031
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0049	**0.0030**

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD038_231129	0861_SD053_231129	0861_SD064_231129	0861_SD067_231129	0861_SD079_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-017	EB2337879-018	EB2337879-019	EB2337879-020	EB2337879-021
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0006	<0.0005	<0.0012	<0.0123	<0.0031
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0006	<0.0005	<0.0012	<0.0123	<0.0031
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0006	<0.0005	<0.0012	<0.0123	<0.0031
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0006	<0.0005	<0.0012	<0.0123	<0.0031
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0049	<0.0012
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0049	<0.0012
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	<0.0049	<0.0012
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0049	<0.0012
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0049	<0.0012
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	<0.0049	<0.0012
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		**0.0019**	**0.0165**	**0.241**	**1.56**	**0.482**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0019**	**0.0153**	**0.232**	**1.41**	**0.460**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0019**	**0.0160**	**0.236**	**1.46**	**0.467**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**108**	**100**	**105**	**Not Determined**	**95.0**
13C8-PFOA	----	0.0002	%		**99.5**	**102**	**95.0**	**Not Determined**	**90.0**

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD080_231129	0861_QC505_231129 101316	----	----	----
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2337879-022	EB2337879-024	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**87.9**	**0.2**	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		**0.0046**	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		**0.0046**	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0426**	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		**0.0057**	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.669**	<0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.0126**	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.006	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		**0.0029**	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0052**	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0013	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0040**	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0013	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0013	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		**0.0017**	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		**0.0046**	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		**0.0027**	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0032	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD080_231129	0861_QC505_231129 101316	----	----	----
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2337879-022	EB2337879-024	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0038	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0032	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0032	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0032	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0032	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0013	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0013	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0013	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0013	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0013	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0013	<0.0005	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		**0.760**	<0.0002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.712**	<0.0002	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.728**	<0.0002	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**100**	**92.5**	----	----	----
13C8-PFOA	----	0.0002	%		**82.5**	**103**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW006_231129	0861_MW007_231129	0861_MW023_231129	0861_SW003_231129	0861_SW021_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-001	EB2337879-002	EB2337879-003	EB2337879-004	EB2337879-005
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**2.62**	**1.47**	**0.07**	**0.11**	**0.73**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**2.26**	**1.30**	**0.06**	**0.06**	**0.49**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**13.5**	**9.51**	**0.43**	**0.33**	**2.74**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.43**	**0.79**	<0.02	<0.02	**0.13**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**34.6**	**11.6**	**0.16**	**0.79**	**5.52**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	<0.04
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.5	**0.2**	<0.1	<0.1	**0.3**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**1.90**	**0.54**	<0.02	**0.15**	**0.79**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**4.62**	**1.96**	**0.03**	**0.15**	**1.01**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.81**	**0.39**	<0.02	**0.04**	**0.19**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**1.21**	**0.84**	<0.01	**0.06**	**0.42**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	**0.05**
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.24	<0.06	<0.05	<0.05	<0.06
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		**0.20**	**0.06**	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.24	<0.06	<0.05	<0.05	<0.06

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW006_231129	0861_MW007_231129	0861_MW023_231129	0861_SW003_231129	0861_SW021_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-001	EB2337879-002	EB2337879-003	EB2337879-004	EB2337879-005
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.24	<0.06	<0.05	<0.05	<0.06
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.24	<0.06	<0.05	<0.05	<0.06
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.24	<0.06	<0.05	<0.05	<0.06
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.10	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.10	<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		<0.10	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		**0.43**	**0.13**	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.10	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.10	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**62.6**	**28.8**	**0.75**	**1.69**	**12.4**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**48.1**	**21.1**	**0.59**	**1.12**	**8.26**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**59.7**	**26.6**	**0.69**	**1.63**	**11.7**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**93.6**	**93.5**	**94.6**	**92.4**	**93.4**
13C8-PFOA	----	0.02	%		**100**	**94.3**	**100**	**100**	**103**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW027_231129	0861_SW033_231129	0861_SW038_231129	0861_SW053_231129	0861_SW064_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-006	EB2337879-007	EB2337879-008	EB2337879-010	EB2337879-011
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.07**	**1.54**	<0.02	**0.05**	**0.42**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.07**	**0.99**	<0.02	**0.04**	**0.20**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.63**	**4.90**	<0.01	**0.41**	**0.83**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.03**	**0.17**	<0.02	**0.02**	**0.04**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.89**	**8.13**	<0.01	**1.10**	**0.95**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.06	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	**0.6**	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.05**	**1.23**	<0.02	<0.02	**0.10**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.11**	**1.90**	<0.02	**0.06**	**0.16**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.03**	**0.25**	<0.02	<0.02	**0.02**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.05**	**0.63**	<0.01	**0.02**	**0.04**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.04	<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	<0.06	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	**0.03**	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.06	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW027_231129	0861_SW033_231129	0861_SW038_231129	0861_SW053_231129	0861_SW064_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-006	EB2337879-007	EB2337879-008	EB2337879-010	EB2337879-011
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.06	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.06	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.06	<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		**1.93**	**20.4**	<0.01	**1.70**	**2.76**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**1.52**	**13.0**	<0.01	**1.51**	**1.78**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**1.83**	**19.2**	<0.01	**1.64**	**2.52**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**93.3**	**91.8**	**89.1**	**94.8**	**96.6**
13C8-PFOA	----	0.02	%		**102**	**102**	**102**	**101**	**105**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW067_231129	0861_SW079_231129	0861_SW080_231129	0861_QC306_231129	0861_QC406_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-012	EB2337879-013	EB2337879-014	EB2337879-015	EB2337879-016
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**1.96**	<0.02	**0.31**	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**1.17**	<0.02	**0.25**	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**5.88**	**0.05**	**1.74**	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.21**	<0.02	**0.14**	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**6.41**	**0.08**	**3.45**	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.04	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		**1.2**	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**1.89**	<0.02	**0.18**	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**1.97**	**0.02**	**0.34**	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.20**	<0.02	**0.07**	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.27**	<0.01	**0.14**	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		**0.07**	<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		<0.06	<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		<0.06	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW067_231129	0861_SW079_231129	0861_SW080_231129	0861_QC306_231129	0861_QC406_231129
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00	29-Nov-2023 00:00
Compound	CAS Number	LOR	Unit		EB2337879-012	EB2337879-013	EB2337879-014	EB2337879-015	EB2337879-016
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.06	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.06	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.06	<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		**21.2**	**0.15**	**6.62**	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**12.3**	**0.13**	**5.19**	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**19.8**	**0.15**	**6.23**	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**92.5**	**94.0**	**97.3**	**93.2**	**97.8**
13C8-PFOA	----	0.02	%		**102**	**103**	**104**	**101**	**102**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC504_231129 131019	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB2337879-023	--------	--------	--------	--------	
				Result	----	----	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
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	<0.01	----	----	----	----	
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	----	----	----	----	
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	----	----	----	----	

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC504_231129 131019	----	----	----	----
				Sampling date / time	29-Nov-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2337879-023	--------	--------	--------	--------
					Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	----	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**101**	----	----	----	----
13C8-PFOA	----	0.02	%		**107**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

CERTIFICATE OF ANALYSIS

Work Order	: **EB2337879-AB**	Page	: 1 of 5
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: + [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 30-Nov-2023 09:30
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Dec-2023
C-O-C number	: ----	Issue Date	: 14-Dec-2023 11:52
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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 (14.12.23): This report has been amended following email from [redacted] on 14.12.23 requesting Sample ID 0861_MW057D_231129 be updated to 0861_MW057I_231129.
- EP231X- PFAS: Sample '0861_SD067_231129' (EB2337879-020) required dilution due to the presence of high-level contaminants. LOR values have been adjusted accordingly. Surrogate recoveries were not determined.
- EP231X- PFAS: Particular samples required dilution due to the presence of high-level contaminants. LOR values have been adjusted accordingly. The LOR for particular analytes has been raised further due to matrix interference.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	0861_MW057S_231129	0861_MW057I_231129	----	----	----
			Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EB2337879-025	EB2337879-026	--------	--------	--------
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	**0.27**	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	**0.19**	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.76**	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	**0.03**	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.35**	<0.01	----	----	----
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	**0.05**	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	**0.05**	<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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW057S_231129	0861_MW057I_231129	----	----	----
				Sampling date / time	29-Nov-2023 00:00	29-Nov-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2337879-025	EB2337879-026	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**1.72**	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**1.11**	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**1.50**	<0.01	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**91.5**	**97.1**	----	----	----
13C8-PFOA	----	0.02	%		**105**	**106**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	***Low***	***High***
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2337879-AA**	Page	: 1 of 7
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Contact	[redacted]
Address	[redacted]	Address	[redacted]
Telephone	[redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 30-Nov-2023
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Dec-2023
C-O-C number	: ----	Issue Date	: 14-Dec-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Soil Preparation, Stafford, QLD

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: 5466356)									
EB2337879-017	0861_SD038_231129	EA055: Moisture Content	----	0.1	%	87.7	85.2	2.8	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5466342)									
EB2337879-017	0861_SD038_231129	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	0.0019	0.0022	15.5	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5466342)									
EB2337879-017	0861_SD038_231129	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 (0.0006)*	mg/kg	<0.0006	<0.0006	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 (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 (0.0006)*	mg/kg	<0.0006	<0.0006	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: 5466342) - continued									
EB2337879-017	0861_SD038_231129	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5466342)									
EB2337879-017	0861_SD038_231129	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 (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: 5466342)									
EB2337879-017	0861_SD038_231129	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5466342)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	101	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	73.9	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	83.9	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	70.2	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	94.8	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	80.8	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5466342)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	96.2	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.2	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.4	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.1	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5466342)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	81.2	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	81.4	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.1	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	79.2	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5466342)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5466342) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	95.7	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	102	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	108	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	107	54.8	124

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	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5465623)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	94.1	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	82.7	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	73.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	91.5	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	88.4	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	69.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5465623)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	73.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	83.5	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	76.9	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	82.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	82.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	85.1	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	83.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.7	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	85.9	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5465623)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	84.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	96.4	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	81.5	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	68.3	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	81.0	62.6	138

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	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5465623) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	92.5	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5465623)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	87.7	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	111	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	130	64.2	133
EP231P: PFAS Sums (QCLot: 5465623)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5466342)							
EB2337879-018	0861_SD053_231129	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	87.7	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	76.9	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	80.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	71.4	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	106	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5466342)							
EB2337879-018	0861_SD053_231129	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.6	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	106	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	107	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	118	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	88.8	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	84.4	69.0	133

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: 5466342) - continued							
EB2337879-018	0861_SD053_231129	EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	109	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	103	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	119	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	104	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5466342)							
EB2337879-018	0861_SD053_231129	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	110	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	102	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	86.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	93.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	93.6	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	91.2	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5466342)							
EB2337879-018	0861_SD053_231129	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	95.7	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	106	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	109	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	73.8	70.0	130

QUALITY CONTROL REPORT

Work Order	: **EB2337879-AB**	Page	: 1 of 4
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 30-Nov-2023
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Dec-2023
C-O-C number	: ----	Issue Date	: 14-Dec-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5465623)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	94.1	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	82.7	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	73.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	91.5	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	88.4	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	69.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5465623)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	73.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	83.5	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	76.9	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	82.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	82.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	85.1	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	83.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.7	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	85.9	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5465623)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	84.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	96.4	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	81.5	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	68.3	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	81.0	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	92.5	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5465623)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5465623) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	87.7	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	111	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	130	64.2	133
EP231P: PFAS Sums (QCLot: 5465623)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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	: **EB2337879**	Page	: 1 of 7
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 30-Nov-2023
Site	: ----	Issue Date	: 14-Dec-2023
Sampler	: AECOM	No. of samples received	: 25
Order number	: 60612563 3.1	No. of samples analysed	: 25

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, 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: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EB2337879--018	0861_SD053_231129	**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	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	18	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: **SOIL**

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
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055)							
0861_SD038_231129, 0861_SD053_231129, 0861_SD064_231129, 0861_SD067_231129, 0861_SD079_231129, 0861_SD080_231129, 0861_QC505_231129 - 101316	**29-Nov-2023**	**----**	----	**----**	**04-Dec-2023**	13-Dec-2023	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
0861_SD038_231129, 0861_SD053_231129, 0861_SD064_231129, 0861_SD067_231129, 0861_SD079_231129, 0861_SD080_231129, 0861_QC505_231129 - 101316	**29-Nov-2023**	**05-Dec-2023**	27-May-2024	✓	**11-Dec-2023**	14-Jan-2024	✓

Matrix: **SOIL**

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
0861_SD038_231129, 0861_SD053_231129, 0861_SD064_231129, 0861_SD067_231129, 0861_SD079_231129, 0861_SD080_231129, 0861_QC505_231129 - 101316	**29-Nov-2023**	**05-Dec-2023**	27-May-2024	✓	**11-Dec-2023**	14-Jan-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
0861_SD038_231129, 0861_SD053_231129, 0861_SD064_231129, 0861_SD067_231129, 0861_SD079_231129, 0861_SD080_231129, 0861_QC505_231129 - 101316	**29-Nov-2023**	**05-Dec-2023**	27-May-2024	✓	**11-Dec-2023**	14-Jan-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
0861_SD038_231129, 0861_SD053_231129, 0861_SD064_231129, 0861_SD067_231129, 0861_SD079_231129, 0861_SD080_231129, 0861_QC505_231129 - 101316	**29-Nov-2023**	**05-Dec-2023**	27-May-2024	✓	**11-Dec-2023**	14-Jan-2024	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
0861_SD038_231129, 0861_SD053_231129, 0861_SD064_231129, 0861_SD067_231129, 0861_SD079_231129, 0861_SD080_231129, 0861_QC505_231129 - 101316	**29-Nov-2023**	**05-Dec-2023**	27-May-2024	✓	**11-Dec-2023**	14-Jan-2024	✓

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
0861_MW006_231129, 0861_MW007_231129, 0861_MW023_231129, 0861_SW003_231129, 0861_SW021_231129, 0861_SW027_231129, 0861_SW033_231129, 0861_SW038_231129, 0861_SW053_231129, 0861_SW064_231129, 0861_SW067_231129, 0861_SW079_231129, 0861_SW080_231129, 0861_QC306_231129, 0861_QC406_231129, 0861_QC504_231129 - 131019, 0861_MW057S_231129, 0861_MW057I_231129	**29-Nov-2023**	**08-Dec-2023**	27-May-2024	✓	**08-Dec-2023**	27-May-2024	✓

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
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW006_231129,	0861_MW007_231129,	**29-Nov-2023**	**08-Dec-2023**	27-May-2024	✓	**08-Dec-2023**	27-May-2024	✓
0861_MW023_231129,	0861_SW003_231129,							
0861_SW021_231129,	0861_SW027_231129,							
0861_SW033_231129,	0861_SW038_231129,							
0861_SW053_231129,	0861_SW064_231129,							
0861_SW067_231129,	0861_SW079_231129,							
0861_SW080_231129,	0861_QC306_231129,							
0861_QC406_231129,	0861_QC504_231129 - 131019,							
0861_MW057S_231129,	0861_MW057I_231129							
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
0861_MW006_231129,	0861_MW007_231129,	**29-Nov-2023**	**08-Dec-2023**	27-May-2024	✓	**08-Dec-2023**	27-May-2024	✓
0861_MW023_231129,	0861_SW003_231129,							
0861_SW021_231129,	0861_SW027_231129,							
0861_SW033_231129,	0861_SW038_231129,							
0861_SW053_231129,	0861_SW064_231129,							
0861_SW067_231129,	0861_SW079_231129,							
0861_SW080_231129,	0861_QC306_231129,							
0861_QC406_231129,	0861_QC504_231129 - 131019,							
0861_MW057S_231129,	0861_MW057I_231129							
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW006_231129,	0861_MW007_231129,	**29-Nov-2023**	**08-Dec-2023**	27-May-2024	✓	**08-Dec-2023**	27-May-2024	✓
0861_MW023_231129,	0861_SW003_231129,							
0861_SW021_231129,	0861_SW027_231129,							
0861_SW033_231129,	0861_SW038_231129,							
0861_SW053_231129,	0861_SW064_231129,							
0861_SW067_231129,	0861_SW079_231129,							
0861_SW080_231129,	0861_QC306_231129,							
0861_QC406_231129,	0861_QC504_231129 - 131019,							
0861_MW057S_231129,	0861_MW057I_231129							

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
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
0861_MW006_231129, 0861_MW007_231129, 0861_MW023_231129, 0861_SW003_231129, 0861_SW021_231129, 0861_SW027_231129, 0861_SW033_231129, 0861_SW038_231129, 0861_SW053_231129, 0861_SW064_231129, 0861_SW067_231129, 0861_SW079_231129, 0861_SW080_231129, 0861_QC306_231129, 0861_QC406_231129, 0861_QC504_231129 - 131019, 0861_MW057S_231129, 0861_MW057I_231129	**29-Nov-2023**	**08-Dec-2023**	27-May-2024	✓	**08-Dec-2023**	27-May-2024	✓

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	1	7	**14.29**	**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	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
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	1	7	**14.29**	**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	0	18	**0.00**	**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	0	18	**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
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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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	: **EB2333887**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	[redacted]
Telephone	[redacted]	Telephone	[redacted]
Facsimile	: [redacted]	Facsimile	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Page	: 1 of 5
Order number	: 60612563 3.1	Quote number	: ES2020AECOMAU0024 (SY/139/19 V3_QLD)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 31-Oct-2023 10:24	Issue Date	: 08-Nov-2023
Client Requested Due Date	: 10-Nov-2023	Scheduled Reporting Date	: **10-Nov-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 3.0°C, 3.4°C, 4.7°C - Ice present
Receipt Detail	: HARD ESKIES	No. of samples received / analysed	: 60 / 60

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 be advised that where the sample ID "QC108_231024" is listed twice on the Chain of Custody, this sample has only been reported once on the workorder (#068). No additional sample with the sample ID "QC108_231024" was received to forward to NMI. If you wish to discuss this, please contact client services at [redacted]**
- ***SRN Reissued 8/11/2023: Samples 10, 11, 031, 033, 035, 037, 53, 68, 070, 072 renamed as per email from [redacted] on 1/11/2023***
- ***SRN Reissued 8/11/2023: COA report will be split so sample 067 is on a seperate COA as per email from [redacted] 8/11/2023.***
- **Please be advised that samples "0861_MW005_231027", "0861_MW012_231027", "0861_MW020_231027", "0861_MW025_231027", "0861_MW050_231027" and "0861_SW049_231023" were not received at the laboratory (denoted SNR on the scanned COC).**
- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2333887 and EB2333894) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on [redacted]**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- **Samples "QC200_231023", "QC201_231023", "QC207_231023", "QC211_231028", "QC409_231026" and "QC210_231026" have been forwarded to NMI, as requested. Please note that this will incur a freight forwarding fee.**

- 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.
- **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.**

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 (28 analytes)
EB2333887-001	23-Oct-2023 00:00	0861_MW002_231023	✓
EB2333887-005	27-Oct-2023 00:00	0861_MW021_231027	✓
EB2333887-006	25-Oct-2023 00:00	0861_MW022_231025	✓
EB2333887-007	24-Oct-2023 00:00	0861_MW024_231024	✓
EB2333887-009	27-Oct-2023 00:00	0861_MW026_231027	✓
EB2333887-010	25-Oct-2023 00:00	0861_MW028_231025	✓
EB2333887-011	25-Oct-2023 00:00	0861_MW029_231025	✓
EB2333887-012	23-Oct-2023 00:00	0861_MW030_231023	✓
EB2333887-013	27-Oct-2023 00:00	0861_MW309_231027	✓
EB2333887-014	23-Oct-2023 00:00	0861_MW031_231023	✓
EB2333887-015	27-Oct-2023 00:00	0861_MW032_231027	✓
EB2333887-016	27-Oct-2023 00:00	0861_MW033_231027	✓
EB2333887-017	23-Oct-2023 00:00	0861_MW034_231023	✓
EB2333887-018	24-Oct-2023 00:00	0861_MW035_231024	✓
EB2333887-019	24-Oct-2023 00:00	0861_MW036_231024	✓
EB2333887-020	23-Oct-2023 00:00	0861_MW037_231023	✓
EB2333887-021	30-Oct-2023 00:00	0861_MW041_231030	✓
EB2333887-022	30-Oct-2023 00:00	0861_MW042_231030	✓
EB2333887-023	30-Oct-2023 00:00	0861_MW043_231030	✓
EB2333887-024	24-Oct-2023 00:00	0861_MW044_231024	✓
EB2333887-025	31-Oct-2023 00:00	0861_MW046_231027	✓
EB2333887-026	26-Oct-2023 00:00	0861_MW047_231026	✓
EB2333887-027	26-Oct-2023 00:00	0861_MW048_231026	✓
EB2333887-029	24-Oct-2023 00:00	0861_MW055S_231024	✓
EB2333887-030	24-Oct-2023 00:00	0861_MW055D_231024	✓
EB2333887-031	23-Oct-2023 00:00	0861_QC100_231023	✓
EB2333887-033	23-Oct-2023 00:00	0861_QC101_231023	✓
EB2333887-035	23-Oct-2023 00:00	0861_QC107_231023	✓
EB2333887-037	28-Oct-2023 00:00	0861_QC111_231028	✓
EB2333887-039	27-Oct-2023 00:00	0861_SW002_231027	✓
EB2333887-040	25-Oct-2023 00:00	0861_SW004_231025	✓
EB2333887-041	25-Oct-2023 00:00	0861_SW005_231025	✓
EB2333887-042	25-Oct-2023 00:00	0861_SW008_231025	✓
EB2333887-043	25-Oct-2023 00:00	0861_SW009_231025	✓
EB2333887-044	24-Oct-2023 00:00	0861_SW011_231024	✓

			WATER - EP231X PFAS - Full Suite (28 analytes)
EB2333887-045	25-Oct-2023 00:00	0861_SW015_231025	✓
EB2333887-046	25-Oct-2023 00:00	0861_SW016_231025	✓
EB2333887-047	25-Oct-2023 00:00	0861_SW018_231025	✓
EB2333887-048	25-Oct-2023 00:00	0861_SW020_231025	✓
EB2333887-049	25-Oct-2023 00:00	0861_SW028_231025	✓
EB2333887-050	24-Oct-2023 00:00	0861_SW030_231024	✓
EB2333887-051	25-Oct-2023 00:00	0861_SW034_231025	✓
EB2333887-052	24-Oct-2023 00:00	0861_SW036_231024	✓
EB2333887-053	27-Oct-2023 00:00	0861_SW037_231027	✓
EB2333887-054	23-Oct-2023 00:00	0861_SW047_231023	✓
EB2333887-055	27-Oct-2023 00:00	0861_SW048_231027	✓
EB2333887-057	24-Oct-2023 00:00	0861_SW050_231024	✓
EB2333887-058	24-Oct-2023 00:00	0861_SW051_231024	✓
EB2333887-059	24-Oct-2023 00:00	0861_SW056_231024	✓
EB2333887-060	27-Oct-2023 00:00	0861_SW059_231027	✓
EB2333887-061	27-Oct-2023 00:00	0861_SW076_231027	✓
EB2333887-062	23-Oct-2023 00:00	0861_SW088_231023	✓
EB2333887-063	23-Oct-2023 00:00	0861_SW089_231023	✓
EB2333887-064	23-Oct-2023 00:00	0861_SW090_231023	✓
EB2333887-065	24-Oct-2023 00:00	0861_SW094_231024	✓
EB2333887-066	24-Oct-2023 00:00	0861_SW099_231024	✓
EB2333887-067	24-Oct-2023 00:00	0861_SW100_231024	✓
EB2333887-068	24-Oct-2023 00:00	0861_QC108_231024	✓
EB2333887-070	26-Oct-2023 00:00	0861_QC109_231026	✓
EB2333887-072	26-Oct-2023 00:00	0861_QC110_231026	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

[redacted]

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

DERP ESDAT REPORTS

- EDI Format - ESDAT (ESDAT) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- A4 - AU Tax Invoice (INV) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

CERTIFICATE OF ANALYSIS

Work Order	: **EB2333887-AA**	Page	: 1 of 27
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023 10:24
Order number	: 60612563 3.1	Date Analysis Commenced	: 02-Nov-2023
C-O-C number	: ----	Issue Date	: 15-Nov-2023 17:29
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
No. of samples received	: 59		
No. of samples analysed	: 59		

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 - Organics	Brisbane Organics, Stafford, QLD

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.

- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2333887 and EB2333894) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- 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.
- EP231X PFAS: Whole bottle extraction was not possible for particular samples. Samples required dilution prior to extraction due to the presence of high level contaminants. LOR values have been adjusted accordingly.
- EP231X PFAS: High LCS recovery deemed acceptable as all associated analyte results are less than LOR.
- EP231X PFAS: Particular samples showed matrix interference indicated by internal standard recovery less than 50%. This is deemed acceptable as all associated analytes are less than the limit of reporting.
- EP231X PFAS: The LOR values for particular analytes have been raised in particular samples due to matrix interference.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW002_231023	0861_MW021_231027	0861_MW022_231025	0861_MW024_231024	0861_MW026_231027
				Sampling date / time	23-Oct-2023 00:00	27-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-001	EB2333887-005	EB2333887-006	EB2333887-007	EB2333887-009
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	**2.18**	**1.52**	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	**4.25**	**1.51**	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	**42.8**	**8.06**	**0.04**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	**2.08**	**0.14**	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	**148**	**2.03**	<0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	**0.5**	**0.7**	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	**1.03**	**0.31**	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	**4.72**	**1.30**	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	**1.10**	**0.23**	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	**4.72**	**0.45**	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	**0.11**	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.24	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.24	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.24	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW002_231023	0861_MW021_231027	0861_MW022_231025	0861_MW024_231024	0861_MW026_231027
				Sampling date / time	23-Oct-2023 00:00	27-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-001	EB2333887-005	EB2333887-006	EB2333887-007	EB2333887-009
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.24	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.24	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.10	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.10	<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	<0.10	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.10	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.20	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.10	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		<0.01	**211**	**16.2**	**0.04**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**191**	**10.1**	**0.04**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	**205**	**14.6**	**0.04**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**87.6**	**96.1**	**91.5**	**93.4**	**89.8**
13C8-PFOA	----	0.02	%		**92.0**	**93.2**	**94.6**	**93.6**	**91.9**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW028_231025	0861_MW029_231025	0861_MW030_231023	0861_MW309_231027	0861_MW031_231023
				Sampling date / time	25-Oct-2023 00:00	25-Oct-2023 00:00	23-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-010	EB2333887-011	EB2333887-012	EB2333887-013	EB2333887-014
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**1.38**	**0.64**	**3.90**	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**1.81**	**0.77**	**3.79**	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**9.22**	**4.07**	**11.3**	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.97**	**0.25**	**0.30**	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**12.5**	**3.44**	**0.41**	<0.01	<0.01
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**	**0.9**	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.43**	**0.16**	**1.44**	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**1.85**	**0.72**	**7.69**	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.32**	**0.12**	**1.32**	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.74**	**0.21**	**1.41**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW028_231025	0861_MW029_231025	0861_MW030_231023	0861_MW309_231027	0861_MW031_231023
				Sampling date / time	25-Oct-2023 00:00	25-Oct-2023 00:00	23-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-010	EB2333887-011	EB2333887-012	EB2333887-013	EB2333887-014
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**29.5**	**10.5**	**32.5**	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**21.7**	**7.51**	**11.7**	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**26.7**	**9.46**	**28.4**	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**93.2**	**94.8**	**94.7**	**94.5**	**100**
13C8-PFOA	----	0.02	%		**95.5**	**95.1**	**91.9**	**92.4**	**94.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW032_231027	0861_MW033_231027	0861_MW034_231023	0861_MW035_231024	0861_MW036_231024
				Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-015	EB2333887-016	EB2333887-017	EB2333887-018	EB2333887-019
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**1.66**	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**1.72**	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**9.01**	<0.01	<0.01	<0.01	**0.03**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.75**	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**20.9**	**0.02**	<0.01	<0.01	<0.01
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		**0.6**	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.77**	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**3.44**	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.78**	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**2.02**	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		**0.06**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW032_231027	0861_MW033_231027	0861_MW034_231023	0861_MW035_231024	0861_MW036_231024
				Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-015	EB2333887-016	EB2333887-017	EB2333887-018	EB2333887-019
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**41.7**	**0.02**	<0.01	<0.01	**0.03**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**29.9**	**0.02**	<0.01	<0.01	**0.03**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**39.2**	**0.02**	<0.01	<0.01	**0.03**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**97.8**	**95.1**	**92.6**	**97.4**	**95.3**
13C8-PFOA	----	0.02	%		**95.2**	**94.2**	**95.0**	**94.2**	**95.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW037_231023	0861_MW041_231030	0861_MW042_231030	0861_MW043_231030	0861_MW044_231024
				Sampling date / time	23-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-020	EB2333887-021	EB2333887-022	EB2333887-023	EB2333887-024
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**2.32**	**0.58**	<0.02	**0.05**	<0.03
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**2.20**	**0.13**	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**5.33**	**0.13**	**0.01**	**0.04**	<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		**0.61**	**0.13**	**0.02**	**0.06**	<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		**0.2**	**0.3**	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.35**	**0.62**	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**1.68**	**0.54**	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.18**	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.09**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW037_231023	0861_MW041_231030	0861_MW042_231030	0861_MW043_231030	0861_MW044_231024
				Sampling date / time	23-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-020	EB2333887-021	EB2333887-022	EB2333887-023	EB2333887-024
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**13.0**	**2.43**	**0.03**	**0.15**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**5.94**	**0.26**	**0.03**	**0.10**	<0.02
Sum of PFAS (WA DER List)	----	0.01	µg/L		**10.8**	**2.30**	**0.03**	**0.15**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**92.2**	**95.0**	**88.3**	**85.7**	**96.0**
13C8-PFOA	----	0.02	%		**93.1**	**97.6**	**94.7**	**97.2**	**98.0**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW046_231027	0861_MW047_231026	0861_MW048_231026	0861_MW055S_231024	0861_MW055D_231024
				Sampling date / time	31-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-025	EB2333887-026	EB2333887-027	EB2333887-029	EB2333887-030
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**7.25**	<0.07	**0.48**	**0.17**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**7.52**	**0.05**	**0.50**	**0.25**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**52.4**	**0.42**	**3.43**	**1.39**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**6.28**	**0.03**	**0.16**	**0.08**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**195**	**0.68**	**5.62**	**1.01**	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		**9.6**	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**20.4**	<0.02	**0.14**	**0.04**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**27.0**	**0.03**	**0.52**	**0.17**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**5.88**	<0.02	**0.08**	**0.03**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**14.2**	<0.01	**0.15**	**0.08**	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		**0.50**	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.62	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.62	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.62	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW046_231027	0861_MW047_231026	0861_MW048_231026	0861_MW055S_231024	0861_MW055D_231024
				Sampling date / time	31-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-025	EB2333887-026	EB2333887-027	EB2333887-029	EB2333887-030
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.62	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.62	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.25	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.25	<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		<0.25	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		**24.1**	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		**2.55**	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.25	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**373**	**1.21**	**11.1**	**3.22**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**247**	**1.10**	**9.05**	**2.40**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**358**	**1.13**	**10.4**	**2.89**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**85.0**	**95.5**	**107**	**75.3**	**89.4**
13C8-PFOA	----	0.02	%		**94.3**	**97.4**	**94.7**	**98.6**	**95.1**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC100_231023	0861_QC101_231023	0861_QC107_231023	0861_QC111_231028	0861_SW002_231027
				Sampling date / time	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	28-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-031	EB2333887-033	EB2333887-035	EB2333887-037	EB2333887-039
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**2.38**	<0.02	<0.02	<0.02	**0.03**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**2.29**	<0.02	<0.02	<0.02	**0.02**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**6.40**	<0.01	<0.01	**0.03**	**0.19**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.06**	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.50**	<0.01	**0.01**	<0.01	**0.26**
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		**0.6**	<0.1	<0.1	<0.1	**0.1**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.36**	<0.02	<0.02	<0.02	**0.46**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**1.76**	<0.02	<0.02	<0.02	**0.34**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.22**	<0.02	<0.02	<0.02	**0.17**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.11**	<0.01	<0.01	<0.01	**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 (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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC100_231023	0861_QC101_231023	0861_QC107_231023	0861_QC111_231028	0861_SW002_231027
				Sampling date / time	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	28-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-031	EB2333887-033	EB2333887-035	EB2333887-037	EB2333887-039
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**14.7**	<0.01	**0.01**	**0.03**	**1.62**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**6.90**	<0.01	**0.01**	**0.03**	**0.45**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**12.3**	<0.01	**0.01**	**0.03**	**1.60**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**86.6**	**112**	**102**	**106**	**101**
13C8-PFOA	----	0.02	%		**97.5**	**98.6**	**101**	**107**	**97.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW004_231025	0861_SW005_231025	0861_SW008_231025	0861_SW009_231025	0861_SW011_231024
				Sampling date / time	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-040	EB2333887-041	EB2333887-042	EB2333887-043	EB2333887-044
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	**0.06**	<0.02	**0.06**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	**0.04**	<0.02	**0.05**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.02**	**0.01**	**0.23**	<0.02	**0.50**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.03**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.04**	**0.04**	**0.39**	**0.03**	**0.89**
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**	<0.02	**0.04**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	**0.08**	<0.02	**0.07**
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	**0.02**	<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 (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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW004_231025	0861_SW005_231025	0861_SW008_231025	0861_SW009_231025	0861_SW011_231024
				Sampling date / time	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-040	EB2333887-041	EB2333887-042	EB2333887-043	EB2333887-044
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.06**	**0.05**	**0.89**	**0.03**	**1.68**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.06**	**0.05**	**0.62**	**0.03**	**1.39**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.06**	**0.05**	**0.85**	**0.03**	**1.60**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**104**	**99.2**	**100**	**101**	**104**
13C8-PFOA	----	0.02	%		**92.6**	**111**	**74.5**	**74.2**	**90.1**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW015_231025	0861_SW016_231025	0861_SW018_231025	0861_SW020_231025	0861_SW028_231025
				Sampling date / time	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-045	EB2333887-046	EB2333887-047	EB2333887-048	EB2333887-049
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.81**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.33**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.02**	**0.02**	<0.01	<0.02	**1.28**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.03**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.05**	**0.04**	**0.02**	**0.04**	**0.94**
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		<0.2	<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	**0.06**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.20**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.03
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	**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 (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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW015_231025	0861_SW016_231025	0861_SW018_231025	0861_SW020_231025	0861_SW028_231025
				Sampling date / time	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-045	EB2333887-046	EB2333887-047	EB2333887-048	EB2333887-049
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.07**	**0.06**	**0.02**	**0.04**	**3.70**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.07**	**0.06**	**0.02**	**0.04**	**2.22**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.07**	**0.06**	**0.02**	**0.04**	**3.34**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**110**	**102**	**94.3**	**108**	**107**
13C8-PFOA	----	0.02	%		**103**	**103**	**93.2**	**102**	**98.9**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW030_231024	0861_SW034_231025	0861_SW036_231024	0861_SW037_231027	0861_SW047_231023
				Sampling date / time	24-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-050	EB2333887-051	EB2333887-052	EB2333887-053	EB2333887-054
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.12**	<0.02	<0.02	**2.68**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.09**	<0.02	<0.02	**1.93**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.64**	<0.02	**0.04**	**7.54**	<0.03
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.04**	<0.02	<0.02	**0.29**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**2.31**	**0.05**	**0.06**	**4.19**	<0.01
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**	**0.5**	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.20**	<0.02	<0.02	**1.15**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.18**	<0.02	<0.02	**3.24**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.09**	<0.02	<0.02	**1.04**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.09**	<0.01	<0.01	**1.43**	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	**0.03**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW030_231024	0861_SW034_231025	0861_SW036_231024	0861_SW037_231027	0861_SW047_231023
				Sampling date / time	24-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-050	EB2333887-051	EB2333887-052	EB2333887-053	EB2333887-054
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.07**	<0.05	<0.05	**0.12**	<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		**3.93**	**0.05**	**0.20**	**24.1**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**2.95**	**0.05**	**0.10**	**11.7**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**3.80**	**0.05**	**0.20**	**21.9**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**98.7**	**114**	**109**	**122**	**96.3**
13C8-PFOA	----	0.02	%		**93.1**	**96.8**	**99.6**	**96.1**	**92.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW048_231027	0861_SW050_231024	0861_SW051_231024	0861_SW056_231024	0861_SW059_231027
				Sampling date / time	27-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-055	EB2333887-057	EB2333887-058	EB2333887-059	EB2333887-060
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.14	**0.02**	**0.02**	**0.79**	**0.88**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.08**	**0.02**	**0.03**	**0.69**	**0.59**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.54**	**0.12**	**0.17**	**3.34**	**3.12**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.04**	<0.02	<0.02	**0.18**	**0.15**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**2.42**	**0.39**	**0.37**	**4.43**	**4.20**
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	**0.3**	**0.2**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.08**	**0.03**	**0.04**	**0.78**	**0.43**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.34**	**0.04**	**0.06**	**1.18**	**0.89**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.14**	<0.02	<0.02	**0.46**	**0.30**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.18**	**0.02**	**0.03**	**0.48**	**0.49**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		**0.04**	<0.02	<0.02	**0.03**	**0.03**
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		**0.03**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW048_231027	0861_SW050_231024	0861_SW051_231024	0861_SW056_231024	0861_SW059_231027
				Sampling date / time	27-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-055	EB2333887-057	EB2333887-058	EB2333887-059	EB2333887-060
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.76**	<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		**4.65**	**0.64**	**0.72**	**12.7**	**11.3**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**2.96**	**0.51**	**0.54**	**7.77**	**7.32**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**4.46**	**0.62**	**0.69**	**11.8**	**10.5**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**126**	**96.0**	**106**	**103**	**130**
13C8-PFOA	----	0.02	%		**93.4**	**96.8**	**94.3**	**99.3**	**98.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW076_231027	0861_SW088_231023	0861_SW089_231023	0861_SW090_231023	0861_SW094_231024
				Sampling date / time	27-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-061	EB2333887-062	EB2333887-063	EB2333887-064	EB2333887-065
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.70**	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.60**	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**3.10**	<0.01	<0.01	<0.01	**0.05**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.16**	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**3.41**	<0.01	<0.01	<0.01	**0.05**
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		**0.66**	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.99**	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.38**	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.47**	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		**0.03**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW076_231027	0861_SW088_231023	0861_SW089_231023	0861_SW090_231023	0861_SW094_231024
				Sampling date / time	27-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333887-061	EB2333887-062	EB2333887-063	EB2333887-064	EB2333887-065
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**10.8**	<0.01	<0.01	<0.01	**0.10**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**6.51**	<0.01	<0.01	<0.01	**0.10**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**10.0**	<0.01	<0.01	<0.01	**0.10**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**106**	**112**	**123**	**107**	**105**
13C8-PFOA	----	0.02	%		**97.1**	**98.2**	**94.2**	**100**	**100**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW099_231024	0861_QC108_231024	0861_QC109_231026	0861_QC110_231026	----
				Sampling date / time	24-Oct-2023 00:00	24-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----
Compound	CAS Number	LOR	Unit		EB2333887-066	EB2333887-068	EB2333887-070	EB2333887-072	--------
					Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	**0.44**	**0.06**	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	**0.53**	**0.05**	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.02	**0.02**	**3.53**	**0.51**	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	**0.19**	**0.04**	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.05**	<0.01	**6.52**	**0.84**	----
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	0.1	µg/L		<0.1	<0.1	**0.1**	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	**0.15**	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	**0.49**	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	**0.08**	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	**0.10**	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<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	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<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	----
EP231C: Perfluoroalkyl Sulfonamides									
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	0.05	µg/L		<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	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW099_231024	0861_QC108_231024	0861_QC109_231026	0861_QC110_231026	----
				Sampling date / time	24-Oct-2023 00:00	24-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----
Compound	CAS Number	LOR	Unit		EB2333887-066	EB2333887-068	EB2333887-070	EB2333887-072	--------
					Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	0.05	µg/L		<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	----
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	0.05	µg/L		<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	----
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	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**0.05**	**0.02**	**12.1**	**1.50**	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.05**	**0.02**	**10.0**	**1.35**	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.05**	**0.02**	**11.4**	**1.41**	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**123**	**106**	**104**	**109**	----
13C8-PFOA	----	0.02	%		**95.8**	**79.9**	**91.6**	**86.4**	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

CERTIFICATE OF ANALYSIS

Work Order	: **EB2333887-AB**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	[redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023 10:24
Order number	: 60612563 3.1	Date Analysis Commenced	: 02-Nov-2023
C-O-C number	: ----	Issue Date	: 15-Nov-2023 17:30
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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.

- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2333887 and EB2333894) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- 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.
- EP231X PFAS: Whole bottle extraction was not possible for particular samples. Samples required dilution prior to extraction due to the presence of high level contaminants. LOR values have been adjusted accordingly.
- EP231X PFAS: High LCS recovery deemed acceptable as all associated analyte results are less than LOR.
- EP231X PFAS: Particular samples showed matrix interference indicated by internal standard recovery less than 50%. This is deemed acceptable as all associated analytes are less than the limit of reporting.
- EP231X PFAS: The LOR values for particular analytes have been raised in particular samples due to matrix interference.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW100_231024	----	----	----	----
				Sampling date / time	24-Oct-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2333887-067	--------	--------	--------	--------
					Result	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
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		**0.04**	----	----	----	----
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		<0.02	----	----	----	----
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	----	----	----	----
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		<0.10	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.10	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW100_231024	----	----	----	----
				Sampling date / time	24-Oct-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2333887-067	--------	--------	--------	--------
					Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.05**	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.05**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.05**	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**109**	----	----	----	----
13C8-PFOA	----	0.02	%		**85.0**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2333887-AA**	Page	: 1 of 9
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Contact	[redacted]
Address	[redacted]	Address	[redacted]
Telephone	[redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Order number	: 60612563 3.1	Date Analysis Commenced	: 02-Nov-2023
C-O-C number	: ----	Issue Date	: 15-Nov-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
No. of samples received	: 59		
No. of samples analysed	: 59		

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 - Organics	Brisbane Organics, Stafford, QLD

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: 5402762)									
EB2334009-002	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: 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: 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: 5402762)									
EB2334009-002	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5402762)									
EB2334009-002	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: 5402762) - continued									
EB2334009-002	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: 5402762)									
EB2334009-002	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: 5402762)									
EB2334009-002	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402762)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	109	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	112	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	98.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	106	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	114	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	89.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402773)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	106	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	114	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	98.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	103	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	116	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	99.6	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402774)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	123	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	119	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	118	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	127	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	125	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	128	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402776)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	103	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	106	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	112	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	103	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	96.7	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	76.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402762)								
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	116	72.0	129

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	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402762) - continued								
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	98.0	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	100	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	107	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	95.6	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	110	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	94.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402773)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	98.7	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	103	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	126	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	113	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	# 154	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	136	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	89.8	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402774)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.4	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	97.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	115	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	118	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	122	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	125	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	124	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	140	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	81.8	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402776)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402776) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.8	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	114	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	77.7	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	98.1	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	98.2	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	90.4	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	# 258	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	103	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402762)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	111	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	97.8	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	106	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	108	62.6	138
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	98.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402773)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	90.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	123	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	116	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	85.5	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	121	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	87.6	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	130	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402774)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402774) - continued								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	107	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	113	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	105	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	128	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	92.0	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	133	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402776)								
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	# 190	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.8	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	91.1	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	92.6	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	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: 5402762)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	96.7	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	88.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	97.5	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	108	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402773)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	84.7	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	96.7	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	103	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	# 258	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402774)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	108	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	112	64.0	140

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402774) - continued								
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	105	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	106	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402776)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	93.4	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	105	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 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	0.241 µg/L	101	64.2	133
EP231P: PFAS Sums (QCLot: 5402762)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 5402773)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 5402774)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 5402776)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402762)							

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: 5402762) - continued							
EB2334009-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	97.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	110	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	97.9	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	92.2	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	100	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	91.8	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402762)							
EB2334009-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	90.4	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	102	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	92.2	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	88.8	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	100	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	94.6	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	84.2	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	84.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	97.4	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	86.9	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402762)							
EB2334009-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	97.1	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	94.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	90.7	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	95.3	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	95.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	85.6	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	95.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402762)							
EB2334009-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	88.2	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	92.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	82.1	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	104	70.0	130

QUALITY CONTROL REPORT

Work Order	: **EB2333887-AB**	Page	: 1 of 4
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	[redacted]
Address	: [redacted]	Address	[redacted]
Telephone	[redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Order number	: 60612563 3.1	Date Analysis Commenced	: 02-Nov-2023
C-O-C number	: ----	Issue Date	: 15-Nov-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402776)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	103	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	106	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	112	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	103	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	96.7	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	76.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402776)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.8	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	114	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	77.7	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	98.1	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	98.2	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	90.4	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	# 258	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	103	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402776)								
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	# 190	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.8	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	91.1	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	92.6	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	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: 5402776)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402776) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	93.4	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	105	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 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	0.241 µg/L	101	64.2	133
EP231P: PFAS Sums (QCLot: 5402776)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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	: **EB2333887**	Page	: 1 of 14
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: [redacted]
Contact	: [redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Site	: ----	Issue Date	: 15-Nov-2023
Sampler	: AECOM	No. of samples received	: 60
Order number	: 60612563 3.1	No. of samples analysed	: 60

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 Matrix Spike outliers occur.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **For all regular sample matrices, 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
Laboratory Control Spike (LCS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	QC-5402773-002	----	**Perfluorododecanoic acid (PFDoDA)**	307-55-1	154 %	72.0-134%	**Recovery greater than upper control limit**
EP231B: Perfluoroalkyl Carboxylic Acids	QC-5402776-002	----	**Perfluorotridecanoic acid (PFTrDA)**	72629-94-8	258 %	65.0-144%	**Recovery greater than upper control limit**
EP231C: Perfluoroalkyl Sulfonamides	QC-5402776-002	----	**N-Methyl perfluorooctane sulfonamide (MeFOSA)**	31506-32-8	190 %	68.0-141%	**Recovery greater than upper control limit**
EP231D: (n:2) Fluorotelomer Sulfonic Acids	QC-5402773-002	----	**10:2 Fluorotelomer sulfonic acid (10:2 FTS)**	120226-60-0	258 %	64.2-133%	**Recovery greater than upper control limit**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
	1				
Laboratory Duplicates (DUP)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	1	75	1.33	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	1	75	1.33	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*

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_MW002_231023, 0861_MW030_231023, 0861_MW031_231023, 0861_MW034_231023, 0861_MW037_231023, 0861_QC100_231023, 0861_QC101_231023, 0861_QC107_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW047_231023, 0861_SW088_231023, 0861_SW089_231023, 0861_SW090_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**13-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW100_231024, 0861_QC108_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_231024, 0861_MW035_231024, 0861_MW036_231024, 0861_MW044_231024, 0861_MW055S_231024, 0861_MW055D_231024, 0861_SW011_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW030_231024, 0861_SW036_231024, 0861_SW050_231024, 0861_SW051_231024, 0861_SW056_231024, 0861_SW094_231024, 0861_SW099_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**13-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW022_231025, 0861_MW028_231025, 0861_MW029_231025, 0861_SW004_231025, 0861_SW005_231025, 0861_SW008_231025, 0861_SW009_231025, 0861_SW015_231025, 0861_SW016_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**09-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW018_231025, 0861_SW020_231025, 0861_SW028_231025, 0861_SW034_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC109_231026, 0861_QC110_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW047_231026, 0861_MW048_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**09-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW021_231027, 0861_MW026_231027, 0861_MW309_231027, 0861_MW032_231027, 0861_MW033_231027, 0861_SW002_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW037_231027, 0861_SW048_231027, 0861_SW059_231027, 0861_SW076_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**13-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC111_231028	**28-Oct-2023**	**04-Nov-2023**	25-Apr-2024	✓	**09-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231A: Perfluoroalkyl Sulfonic Acids - Continued							
0861_MW041_231030, 0861_MW042_231030, 0861_MW043_231030	**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**09-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW046_231027	**31-Oct-2023**	**04-Nov-2023**	28-Apr-2024	✓	**09-Nov-2023**	28-Apr-2024	✓

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0861_MW002_231023, 0861_MW030_231023, 0861_MW031_231023, 0861_MW034_231023, 0861_MW037_231023, 0861_QC100_231023, 0861_QC101_231023, 0861_QC107_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW047_231023, 0861_SW088_231023, 0861_SW089_231023, 0861_SW090_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**13-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW100_231024, 0861_QC108_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_231024, 0861_MW035_231024, 0861_MW036_231024, 0861_MW044_231024, 0861_MW055S_231024, 0861_MW055D_231024, 0861_SW011_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW030_231024, 0861_SW036_231024, 0861_SW050_231024, 0861_SW051_231024, 0861_SW056_231024, 0861_SW094_231024, 0861_SW099_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**13-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW022_231025, 0861_MW028_231025, 0861_MW029_231025, 0861_SW004_231025, 0861_SW005_231025, 0861_SW008_231025, 0861_SW009_231025, 0861_SW015_231025, 0861_SW016_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**09-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW018_231025, 0861_SW020_231025, 0861_SW028_231025, 0861_SW034_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC109_231026, 0861_QC110_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW047_231026, 0861_MW048_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**09-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW021_231027, 0861_MW026_231027, 0861_MW309_231027, 0861_MW032_231027, 0861_MW033_231027, 0861_SW002_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW037_231027, 0861_SW048_231027, 0861_SW059_231027, 0861_SW076_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**13-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC111_231028	**28-Oct-2023**	**04-Nov-2023**	25-Apr-2024	✓	**09-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231B: Perfluoroalkyl Carboxylic Acids - Continued							
0861_MW041_231030, 0861_MW042_231030, 0861_MW043_231030	**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**09-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW046_231027	**31-Oct-2023**	**04-Nov-2023**	28-Apr-2024	✓	**09-Nov-2023**	28-Apr-2024	✓

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0861_MW002_231023, 0861_MW030_231023, 0861_MW031_231023, 0861_MW034_231023, 0861_MW037_231023, 0861_QC100_231023, 0861_QC101_231023, 0861_QC107_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW047_231023, 0861_SW088_231023, 0861_SW089_231023, 0861_SW090_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**13-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW100_231024, 0861_QC108_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_231024, 0861_MW035_231024, 0861_MW036_231024, 0861_MW044_231024, 0861_MW055S_231024, 0861_MW055D_231024, 0861_SW011_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW030_231024, 0861_SW036_231024, 0861_SW050_231024, 0861_SW051_231024, 0861_SW056_231024, 0861_SW094_231024, 0861_SW099_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**13-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW022_231025, 0861_MW028_231025, 0861_MW029_231025, 0861_SW004_231025, 0861_SW005_231025, 0861_SW008_231025, 0861_SW009_231025, 0861_SW015_231025, 0861_SW016_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**09-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW018_231025, 0861_SW020_231025, 0861_SW028_231025, 0861_SW034_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC109_231026, 0861_QC110_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW047_231026, 0861_MW048_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**09-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW021_231027, 0861_MW026_231027, 0861_MW309_231027, 0861_MW032_231027, 0861_MW033_231027, 0861_SW002_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW037_231027, 0861_SW048_231027, 0861_SW059_231027, 0861_SW076_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**13-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC111_231028	**28-Oct-2023**	**04-Nov-2023**	25-Apr-2024	✓	**09-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231C: Perfluoroalkyl Sulfonamides - Continued							
0861_MW041_231030, 0861_MW042_231030, 0861_MW043_231030	**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**09-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X)							
0861_MW046_231027	**31-Oct-2023**	**04-Nov-2023**	28-Apr-2024	✓	**09-Nov-2023**	28-Apr-2024	✓

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_MW002_231023, 0861_MW030_231023, 0861_MW031_231023, 0861_MW034_231023, 0861_MW037_231023, 0861_QC100_231023, 0861_QC101_231023, 0861_QC107_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW047_231023, 0861_SW088_231023, 0861_SW089_231023, 0861_SW090_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**13-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW100_231024, 0861_QC108_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_231024, 0861_MW035_231024, 0861_MW036_231024, 0861_MW044_231024, 0861_MW055S_231024, 0861_MW055D_231024, 0861_SW011_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW030_231024, 0861_SW036_231024, 0861_SW050_231024, 0861_SW051_231024, 0861_SW056_231024, 0861_SW094_231024, 0861_SW099_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**13-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW022_231025, 0861_MW028_231025, 0861_MW029_231025, 0861_SW004_231025, 0861_SW005_231025, 0861_SW008_231025, 0861_SW009_231025, 0861_SW015_231025, 0861_SW016_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**09-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW018_231025, 0861_SW020_231025, 0861_SW028_231025, 0861_SW034_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC109_231026, 0861_QC110_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW047_231026, 0861_MW048_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**09-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW021_231027, 0861_MW026_231027, 0861_MW309_231027, 0861_MW032_231027, 0861_MW033_231027, 0861_SW002_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW037_231027, 0861_SW048_231027, 0861_SW059_231027, 0861_SW076_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**13-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC111_231028	**28-Oct-2023**	**04-Nov-2023**	25-Apr-2024	✓	**09-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued							
0861_MW041_231030, 0861_MW042_231030, 0861_MW043_231030	**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**09-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW046_231027	**31-Oct-2023**	**04-Nov-2023**	28-Apr-2024	✓	**09-Nov-2023**	28-Apr-2024	✓

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
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0861_MW002_231023, 0861_MW030_231023, 0861_MW031_231023, 0861_MW034_231023, 0861_MW037_231023, 0861_QC100_231023, 0861_QC101_231023, 0861_QC107_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW047_231023, 0861_SW088_231023, 0861_SW089_231023, 0861_SW090_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**13-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW100_231024, 0861_QC108_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_231024, 0861_MW035_231024, 0861_MW036_231024, 0861_MW044_231024, 0861_MW055S_231024, 0861_MW055D_231024, 0861_SW011_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW030_231024, 0861_SW036_231024, 0861_SW050_231024, 0861_SW051_231024, 0861_SW056_231024, 0861_SW094_231024, 0861_SW099_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**13-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW022_231025, 0861_MW028_231025, 0861_MW029_231025, 0861_SW004_231025, 0861_SW005_231025, 0861_SW008_231025, 0861_SW009_231025, 0861_SW015_231025, 0861_SW016_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**09-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW018_231025, 0861_SW020_231025, 0861_SW028_231025, 0861_SW034_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC109_231026, 0861_QC110_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW047_231026, 0861_MW048_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**09-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW021_231027, 0861_MW026_231027, 0861_MW309_231027, 0861_MW032_231027, 0861_MW033_231027, 0861_SW002_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW037_231027, 0861_SW048_231027, 0861_SW059_231027, 0861_SW076_231027	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**13-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC111_231028	**28-Oct-2023**	**04-Nov-2023**	25-Apr-2024	✓	**09-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231P: PFAS Sums - Continued							
0861_MW041_231030, 0861_MW042_231030, 0861_MW043_231030	**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**09-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW046_231027	**31-Oct-2023**	**04-Nov-2023**	28-Apr-2024	✓	**09-Nov-2023**	28-Apr-2024	✓

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	75	**1.33**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	75	**5.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	75	**5.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	75	**1.33**	**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 LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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	: **EB2333894**		
Amendment	: **1**		
Client	[redacted]	Laboratory	[redacted]
Contact		Contact	
Address		Address	
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Page	: 1 of 5
Order number	: 60612562	Quote number	: ES2020AECOMAU0024 (SY/139/19 V3_QLD)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 31-Oct-2023 10:24	Issue Date	: 18-Dec-2023
Client Requested Due Date	: 18-Dec-2023	Scheduled Reporting Date	: **18-Dec-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: ----
Receipt Detail	: HARD ESKIES	No. of samples received / analysed	: 65 / 65

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
- ***SRN Reissued 3/11/23: As per email from [redacted] on 1/11/23, PFAS EP231X analysis has been added to samples 067 to 73, 075 and 076.***
- ***SRN Reissued 8/11/23: As per email from [redacted] on 1/11/23, Sample 077 had EP231X analysis added. Samples 037, 039, 041, 043, 045, 047, 048, 049, 050, 051, 052, 053, 054, 057, 058, 061, 062, 63, 64, 65, 66, 074, 075, 076, 77 - sample IDs changed.***
- ***04/11/2023*: SRN has been resent to acknowledge that sample QC208_231024 has been forwarded to NMI, as requested. Please note that a freight forwarding fee will apply. For any further information regarding these adjustments please contact client services at ALSEnviro.Brisbane@alsglobal.com.**
- **Please be advised that samples "0861_SD004_231025",0861_SD049_231023, "QC112_231027" and "QC113_231027" were not received at the laboratory (denoted SNR on the scanned COC).**
- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2333887 and EB2333894) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- ***SRN Reissued: As per the email from [redacted] on 15.12.23 this work order has been amended to change the sample ID name from 0861_SW047_231023 to 0861_SW049_231023.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Multiple extra samples were received labelled as ALS #67<->77) and have been placed on hold. If testing is required on these samples, please contact ALS Client Services at ALSEnviro.Brisbane@alsglobal.com**
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**

- **Samples “QC202_231023”, “QC203_231023”, “QC204_231023”, “QC205_231023”, “QC206_231023”, “QC212_231027” and “QC213_231023” have been forwarded to NMI, as requested. Please note that this will incur a freight forwarding fee (fee assigned to workorder EB2333887 only).**
- 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.
- **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.**

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 (28 analytes)
EB2333894-001	27-Oct-2023 00:00	0861_SD002_231027	✓	✓
EB2333894-002	27-Oct-2023 00:00	0861_SD003_231027	✓	✓
EB2333894-004	25-Oct-2023 00:00	0861_SD005_231025	✓	✓
EB2333894-005	25-Oct-2023 00:00	0861_SD008_231025	✓	✓
EB2333894-006	25-Oct-2023 00:00	0861_SD009_231025	✓	✓
EB2333894-007	24-Oct-2023 00:00	0861_SD011_231024	✓	✓
EB2333894-008	25-Oct-2023 00:00	0861_SD015_231025	✓	✓
EB2333894-009	25-Oct-2023 00:00	0861_SD016_231025	✓	✓
EB2333894-010	25-Oct-2023 00:00	0861_SD018_231025	✓	✓
EB2333894-011	25-Oct-2023 00:00	0861_SD020_231025	✓	✓
EB2333894-012	23-Oct-2023 00:00	0861_SD021_231023	✓	✓
EB2333894-013	24-Oct-2023 00:00	0861_SD027_231024	✓	✓
EB2333894-014	25-Oct-2023 00:00	0861_SD028_231025	✓	✓
EB2333894-015	24-Oct-2023 00:00	0861_SD030_231024	✓	✓
EB2333894-016	30-Oct-2023 00:00	0861_SD033_231030	✓	✓
EB2333894-017	25-Oct-2023 00:00	0861_SD034_231025	✓	✓
EB2333894-018	24-Oct-2023 00:00	0861_SD036_231024	✓	✓
EB2333894-019	27-Oct-2023 00:00	0861_SD037_231027	✓	✓
EB2333894-020	24-Oct-2023 00:00	0861_SD041_231024	✓	✓
EB2333894-021	23-Oct-2023 00:00	0861_SD047_231023	✓	✓
EB2333894-022	27-Oct-2023 00:00	0861_SD048_231027	✓	✓
EB2333894-024	24-Oct-2023 00:00	0861_SD050_231024	✓	✓
EB2333894-025	24-Oct-2023 00:00	0861_SD051_231024	✓	✓
EB2333894-026	23-Oct-2023 00:00	0861_SD052_231023	✓	✓
EB2333894-027	24-Oct-2023 00:00	0861_SD056_231024	✓	✓
EB2333894-028	27-Oct-2023 00:00	0861_SD059_231027	✓	✓
EB2333894-029	27-Oct-2023 00:00	0861_SD076_231027	✓	✓
EB2333894-030	23-Oct-2023 00:00	0861_SD088_231023	✓	✓
EB2333894-031	23-Oct-2023 00:00	0861_SD089_231023	✓	✓
EB2333894-032	23-Oct-2023 00:00	0861_SD090_231023	✓	✓
EB2333894-033	23-Oct-2023 00:00	0861_SD091_231023	✓	✓
EB2333894-034	24-Oct-2023 00:00	0861_SD094_231024	✓	✓
EB2333894-035	24-Oct-2023 00:00	0861_SD099_231024	✓	✓
EB2333894-036	24-Oct-2023 00:00	0861_SD100_231024	✓	✓
EB2333894-037	23-Oct-2023 00:00	0681_QC102_231023	✓	✓

			SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)
EB2333894-039	23-Oct-2023 00:00	0681_QC103_231023	✓	✓
EB2333894-041	23-Oct-2023 00:00	0681_QC104_231023	✓	✓
EB2333894-043	23-Oct-2023 00:00	0681_QC105_231023	✓	✓
EB2333894-045	23-Oct-2023 00:00	0681_QC106_231023	✓	✓
EB2333894-064	27-Oct-2023 00:00	0861_QC501_231031	✓	✓
EB2333894-066	30-Oct-2023 00:00	0861_QC503_231031	✓	✓
EB2333894-077	25-Oct-2023 00:00	0861_SD004_231025	✓	✓

Matrix: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EP231X PFAS - Full Suite (28 analytes)
EB2333894-047	23-Oct-2023 00:00	0681_QC300_231023	✓
EB2333894-048	23-Oct-2023 00:00	0681_QC400_231023	✓
EB2333894-049	24-Oct-2023 00:00	0681_QC301_231024	✓
EB2333894-050	24-Oct-2023 00:00	0681_QC401_231024	✓
EB2333894-051	25-Oct-2023 00:00	0681_QC302_231025	✓
EB2333894-052	25-Oct-2023 00:00	0681_QC402_231025	✓
EB2333894-053	26-Oct-2023 00:00	0681_QC303_231026	✓
EB2333894-054	26-Oct-2023 00:00	0681_QC403_231026	✓
EB2333894-057	27-Oct-2023 00:00	0681_QC304_231027	✓
EB2333894-058	27-Oct-2023 00:00	0681_QC404_231027	✓
EB2333894-061	27-Oct-2023 00:00	0681_QC305_231030	✓
EB2333894-062	27-Oct-2023 00:00	0681_QC405_231030	✓
EB2333894-063	27-Oct-2023 00:00	0861_QC501_231031	✓
EB2333894-065	30-Oct-2023 00:00	0861_QC503_231031	✓
EB2333894-067	30-Oct-2023 00:00	0861_MW56I_231026	✓
EB2333894-068	30-Oct-2023 00:00	0861_MW005_231028	✓
EB2333894-069	30-Oct-2023 00:00	0861_MW012_231028	✓
EB2333894-070	30-Oct-2023 00:00	0861_MW020_231028	✓
EB2333894-071	28-Oct-2023 00:00	0861_MW025_231028	✓
EB2333894-072	28-Oct-2023 00:00	0861_MW050_231028	✓
EB2333894-073	28-Oct-2023 00:00	0861_SW049_231023	✓
EB2333894-075	28-Oct-2023 00:00	0681_QC112_231028	✓

			WATER - EP231X PFAS - Full Suite (28 analytes)
EB2333894-076	28-Oct-2023 00:00	0681_QC113_231028	✓

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	AP_CustomerService.ANZ@aecom.com

DERP ESDAT REPORTS

- EDI Format - ESDAT (ESDAT)	Email	[redacted]
[redacted]		
- *AU Certificate of Analysis - NATA (COA)	Email	
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	
- Chain of Custody (CoC) (COC)	Email	
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	
- EDI Format - ESDAT (ESDAT)	Email	

CERTIFICATE OF ANALYSIS

Work Order	: **EB2333894**	Page	: 1 of 31
Amendment	: 1		
Client	[redacted]	Laboratory	[redacted]
Contact		Contact	
Address		Address	
Telephone		Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023 10:24
Order number	: 60612562	Date Analysis Commenced	: 01-Nov-2023
C-O-C number	: ----	Issue Date	: 18-Dec-2023 12:38
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
No. of samples received	: 65		
No. of samples analysed	: 65		

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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD
	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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.

- **SPLIT WORK ORDER: It should be noted that ALS has split this work order over the following work orders (EB2333887 and EB2333894) due to the size of the sample numbers. For any further information regarding this processing of samples please contact ALS client services division on ALSEnviro.Brisbane@alsglobal.com**
- 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 (15.12.2023): As per the email from [redacted] on 15.12.23 this work order has been amended to change the sample ID name from 0861_SW047_231023 to 0861_SW049_231023.
- EP231X PFAS: The LOR values of particular analytes have been raised for particular samples due to matrix interferences.
- EP231X PFAS: The high recovery matrix spikes are deemed acceptable as associated results are less than the limit of reporting.
- EP231X PFAS: High LCS recovery deemed acceptable as all associated analyte results are less than LOR.
- EP231X PFAS: Particular samples required dilution prior to extraction due to matrix interferences. LOR values have been adjusted accordingly. The LOR values of particular analytes have been raised further due to additional matrix interference.
- EP231X PFAS: Whole bottle extraction was not possible for sample '0861_MW020_231028' (EB2333894-070). Samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD002_231027	0861_SD003_231027	0861_SD005_231025	0861_SD008_231025	0861_SD009_231025
			Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-001	EB2333894-002	EB2333894-004	EB2333894-005	EB2333894-006
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**29.1**	**5.2**	**43.8**	**59.2**	**41.6**
EP231A: Perfluoroalkyl Sulfonic Acids								
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	**0.0003**	<0.0002	<0.0002	**0.0016**	<0.0002
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	**0.0038**	**0.0006**	**0.0030**	**0.0343**	**0.0021**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	**0.0003**	**0.0014**	<0.0005
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	**0.0003**	<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	<0.0002	<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	**0.0003**	<0.0006
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	**0.0003**	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002
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	**0.0009**	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD002_231027	0861_SD003_231027	0861_SD005_231025	0861_SD008_231025	0861_SD009_231025
			Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-001	EB2333894-002	EB2333894-004	EB2333894-005	EB2333894-006
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	**0.0003**	<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	**0.0045**	**0.0006**	**0.0033**	**0.0398**	**0.0021**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0041**	**0.0006**	**0.0030**	**0.0359**	**0.0021**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0045**	**0.0006**	**0.0030**	**0.0364**	**0.0021**
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**98.5**	**104**	**134**	**120**	**126**
13C8-PFOA	----	0.0002	%	**102**	**104**	**101**	**106**	**108**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD011_231024	0861_SD015_231025	0861_SD016_231025	0861_SD018_231025	0861_SD020_231025
				Sampling date / time	24-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-007	EB2333894-008	EB2333894-009	EB2333894-010	EB2333894-011
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**71.6**	**44.1**	**43.4**	**27.5**	**43.7**
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.0005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0071**	**0.0004**	<0.0002	<0.0002	<0.0002
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		**0.0976**	**0.0069**	**0.0035**	**0.0058**	**0.0064**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0003	<0.0002	<0.0003	<0.0005
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		**0.0009**	**0.0003**	<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		<0.0010	<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		<0.0010	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0010	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0010	<0.0005	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0010	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		**0.0006**	<0.0005	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0010	<0.0002	<0.0002	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD011_231024	0861_SD015_231025	0861_SD016_231025	0861_SD018_231025	0861_SD020_231025
				Sampling date / time	24-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-007	EB2333894-008	EB2333894-009	EB2333894-010	EB2333894-011
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.107**	**0.0076**	**0.0035**	**0.0058**	**0.0064**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.105**	**0.0073**	**0.0035**	**0.0058**	**0.0064**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.107**	**0.0076**	**0.0035**	**0.0058**	**0.0064**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**120**	**102**	**118**	**114**	**126**
13C8-PFOA	----	0.0002	%		**100**	**99.0**	**100**	**108**	**100**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD021_231023	0861_SD027_231024	0861_SD028_231025	0861_SD030_231024	0861_SD033_231030
			Sampling date / time	23-Oct-2023 00:00	24-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00	30-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-012	EB2333894-013	EB2333894-014	EB2333894-015	EB2333894-016
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**15.4**	**7.4**	**43.8**	**30.0**	**24.8**
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	**0.0092**	<0.0003	**0.0005**	<0.0002	**0.0086**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	**0.0081**	**0.0003**	<0.0002	<0.0002	**0.0057**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0503**	**0.0030**	**0.0015**	**0.0023**	**0.0309**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	**0.0038**	<0.0005	<0.0002	<0.0004	**0.0030**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.337**	**0.0243**	**0.0196**	**0.0388**	**0.291**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	**0.0235**	<0.0003	<0.0002	<0.0004	**0.0093**
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	**0.005**	<0.001	<0.001	<0.001	**0.005**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	**0.0060**	<0.0002	<0.0002	<0.0002	**0.0064**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	**0.0163**	**0.0003**	**0.0002**	**0.0002**	**0.0118**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	**0.0048**	<0.0002	<0.0002	<0.0002	**0.0015**
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	**0.0123**	<0.0005	<0.0002	**0.0002**	**0.0057**
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	**0.0018**	<0.0005	<0.0002	<0.0002	**0.0012**
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	**0.0014**	<0.0005	<0.0002	<0.0002	**0.0008**
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	**0.0045**	<0.0005	<0.0002	<0.0002	**0.0013**
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	**0.0029**	<0.0005	<0.0002	<0.0005	**0.0011**
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	**0.0051**	<0.0005	<0.0002	**0.0003**	**0.0015**
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0012	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	**0.0136**	<0.0005	<0.0002	**0.0003**	**0.0004**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD021_231023	0861_SD027_231024	0861_SD028_231025	0861_SD030_231024	0861_SD033_231030
			Sampling date / time	23-Oct-2023 00:00	24-Oct-2023 00:00	25-Oct-2023 00:00	24-Oct-2023 00:00	30-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-012	EB2333894-013	EB2333894-014	EB2333894-015	EB2333894-016
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0012	<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	<0.0012	<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	<0.0015	<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	**0.506**	**0.0279**	**0.0218**	**0.0421**	**0.385**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.387**	**0.0273**	**0.0211**	**0.0411**	**0.322**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.441**	**0.0276**	**0.0218**	**0.0415**	**0.361**
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**110**	**108**	**112**	**120**	**99.0**
13C8-PFOA	----	0.0002	%	**105**	**104**	**101**	**101**	**97.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD034_231025	0861_SD036_231024	0861_SD037_231027	0861_SD041_231024	0861_SD047_231023
				Sampling date / time	25-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00	24-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-017	EB2333894-018	EB2333894-019	EB2333894-020	EB2333894-021
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**11.5**	**51.6**	**88.9**	**58.9**	**40.3**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0008	**0.0374**	**0.0169**	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	**0.0276**	**0.0259**	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0002	**0.183**	**0.245**	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	**0.0195**	**0.0336**	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0035**	<0.0041	**1.06**	**1.55**	**0.0018**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0036	**0.0041**	**0.0226**	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.001	<0.013	**0.002**	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	**0.0142**	**0.0036**	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	**0.0391**	**0.0184**	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	**0.0062**	**0.0060**	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	**0.0251**	**0.0307**	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	**0.0019**	**0.0022**	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0010	**0.0030**	**0.0038**	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0010	**0.0021**	**0.0069**	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0010	<0.0023	**0.0093**	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0010	**0.0009**	**0.0011**	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0006	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0010	**0.0017**	**0.0044**	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD034_231025	0861_SD036_231024	0861_SD037_231027	0861_SD041_231024	0861_SD047_231023
			Sampling date / time	25-Oct-2023 00:00	24-Oct-2023 00:00	27-Oct-2023 00:00	24-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-017	EB2333894-018	EB2333894-019	EB2333894-020	EB2333894-021
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0025	<0.0006	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0006	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0006	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0009	<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	<0.0006	<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	**0.0026**	**0.0016**	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	**0.0009**	<0.0030	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0035**	<0.0002	**1.43**	**1.98**	**0.0018**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0035**	<0.0002	**1.24**	**1.80**	**0.0018**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0035**	<0.0002	**1.37**	**1.87**	**0.0018**
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**132**	**92.0**	**127**	**107**	**102**
13C8-PFOA	----	0.0002	%	**97.5**	**112**	**101**	**97.0**	**102**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD048_231027	0861_SD050_231024	0861_SD051_231024	0861_SD052_231023	0861_SD056_231024
				Sampling date / time	27-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-022	EB2333894-024	EB2333894-025	EB2333894-026	EB2333894-027
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**39.3**	**44.6**	**15.9**	**16.1**	**91.8**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		**0.0003**	<0.0002	<0.0002	<0.0010	**0.0097**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		**0.0007**	<0.0002	<0.0002	<0.0010	**0.0082**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0086**	**0.0008**	<0.0002	<0.0010	**0.0609**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		**0.0015**	<0.0002	<0.0002	<0.0010	**0.0050**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.118**	**0.0086**	**0.0015**	<0.0010	**0.360**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.0024**	<0.0002	<0.0002	<0.0010	<0.0028
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.001	<0.001	<0.001	**0.006**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		**0.0003**	<0.0002	<0.0002	<0.0010	**0.0109**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0010**	<0.0002	<0.0002	<0.0010	**0.0177**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		**0.0005**	<0.0002	<0.0002	<0.0010	**0.0040**
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0010**	<0.0002	<0.0002	<0.0010	**0.0075**
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		**0.0006**	<0.0002	<0.0002	<0.0010	**0.0011**
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		**0.0004**	<0.0002	<0.0002	<0.0010	**0.0010**
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		**0.0007**	<0.0002	<0.0002	<0.0010	**0.0011**
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		**0.0011**	<0.0002	<0.0002	<0.0010	**0.0024**
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		**0.0012**	<0.0002	<0.0002	<0.0010	**0.0010**
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		**0.0012**	<0.0005	<0.0005	<0.0025	<0.0013
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		**0.0017**	**0.0003**	<0.0002	<0.0010	**0.0009**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD048_231027	0861_SD050_231024	0861_SD051_231024	0861_SD052_231023	0861_SD056_231024
			Sampling date / time	27-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-022	EB2333894-024	EB2333894-025	EB2333894-026	EB2333894-027
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0025	<0.0013
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0025	<0.0013
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0025	<0.0013
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0025	<0.0013
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0010	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0010	<0.0005
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	<0.0010	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	**0.0018**	<0.0005	<0.0005	<0.0010	**0.0010**
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	**0.0007**	<0.0005	<0.0005	<0.0010	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.144**	**0.0097**	**0.0015**	<0.0010	**0.498**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.127**	**0.0094**	**0.0015**	<0.0010	**0.421**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.132**	**0.0094**	**0.0015**	<0.0010	**0.478**
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**96.5**	**91.0**	**104**	**106**	**94.0**
13C8-PFOA	----	0.0002	%	**94.5**	**99.0**	**94.0**	**92.0**	**92.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD059_231027	0861_SD076_231027	0861_SD088_231023	0861_SD089_231023	0861_SD090_231023
				Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-028	EB2333894-029	EB2333894-030	EB2333894-031	EB2333894-032
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**73.6**	**89.8**	**40.5**	**37.6**	**61.9**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		**0.0023**	**0.0062**	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		**0.0035**	**0.0056**	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0412**	**0.0480**	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		**0.0047**	**0.0049**	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.378**	**0.428**	<0.0002	<0.0004	<0.0034
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.0112**	**0.0044**	<0.0002	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		**0.001**	**0.004**	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0044	**0.0062**	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0048**	**0.0113**	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		**0.0018**	**0.0026**	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0073**	**0.0067**	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		**0.0016**	**0.0013**	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		**0.0012**	**0.0014**	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		**0.0016**	**0.0018**	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		**0.0022**	**0.0037**	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		**0.0006**	**0.0012**	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0006	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		**0.0010**	<0.0002	<0.0002	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD059_231027	0861_SD076_231027	0861_SD088_231023	0861_SD089_231023	0861_SD090_231023
			Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-028	EB2333894-029	EB2333894-030	EB2333894-031	EB2333894-032
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0006	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0006	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0006	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0006	<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	**0.0011**	<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	<0.0010	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.464**	**0.538**	<0.0002	<0.0002	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.419**	**0.476**	<0.0002	<0.0002	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.436**	**0.514**	<0.0002	<0.0002	<0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**91.0**	**91.5**	**126**	**98.0**	**124**
13C8-PFOA	----	0.0002	%	**96.5**	**93.0**	**94.5**	**98.0**	**98.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD091_231023	0861_SD094_231024	0861_SD099_231024	0861_SD100_231024	0681_QC102_231023
				Sampling date / time	23-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-033	EB2333894-034	EB2333894-035	EB2333894-036	EB2333894-037
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**27.0**	**62.1**	**49.8**	**73.0**	**35.9**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0023	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0006	<0.0020	**0.0031**	<0.0020	<0.0004
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.010	<0.001	<0.010	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0024	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0050	<0.0005	<0.0050	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD091_231023	0861_SD094_231024	0861_SD099_231024	0861_SD100_231024	0681_QC102_231023
				Sampling date / time	23-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	23-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-033	EB2333894-034	EB2333894-035	EB2333894-036	EB2333894-037
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0050	<0.0005	<0.0050	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0050	<0.0005	<0.0050	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0050	<0.0005	<0.0050	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0050	<0.0005	<0.0050	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0020	<0.0002	<0.0020	<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	<0.0020	<0.0005	<0.0020	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0020	<0.0005	<0.0020	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0020	<0.0005	<0.0020	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0020	<0.0005	<0.0020	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		<0.0002	<0.0020	**0.0031**	<0.0020	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	<0.0020	**0.0031**	<0.0020	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	<0.0020	**0.0031**	<0.0020	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**118**	**112**	**104**	**120**	**104**
13C8-PFOA	----	0.0002	%		**96.0**	**94.0**	**101**	**80.0**	**95.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0681_QC103_231023	0681_QC104_231023	0681_QC105_231023	0681_QC106_231023	0861_QC501_231031
			Sampling date / time	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-039	EB2333894-041	EB2333894-043	EB2333894-045	EB2333894-064
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**48.1**	**31.1**	**43.3**	**53.5**	**0.2**
EP231A: Perfluoroalkyl Sulfonic Acids								
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	<0.0002	<0.0002	<0.0002	<0.0002
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	<0.0006	<0.0022	<0.0003	**0.0014**	<0.0002
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	<0.002	<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	<0.0002
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	<0.0002	<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	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0681_QC103_231023	0681_QC104_231023	0681_QC105_231023	0681_QC106_231023	0861_QC501_231031
			Sampling date / time	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	23-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit	EB2333894-039	EB2333894-041	EB2333894-043	EB2333894-045	EB2333894-064
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	<0.0002	<0.0002	<0.0002	**0.0014**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	**0.0014**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	**0.0014**	<0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**118**	**115**	**134**	**119**	**113**
13C8-PFOA	----	0.0002	%	**103**	**106**	**105**	**105**	**104**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_QC503_231031	0861_SD004_231025	----	----	----
			Sampling date / time	30-Oct-2023 00:00	25-Oct-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EB2333894-066	EB2333894-077	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	<0.1	**17.8**	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
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	**0.0003**	----	----	----
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	<0.0002	**0.0054**	----	----	----
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 (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_QC503_231031	0861_SD004_231025	----	----	----
				Sampling date / time	30-Oct-2023 00:00	25-Oct-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2333894-066	EB2333894-077	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.0002	**0.0057**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	**0.0057**	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	**0.0057**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**122**	**114**	----	----	----
13C8-PFOA	----	0.0002	%		**106**	**100**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0681_QC300_231023	0681_QC400_231023	0681_QC301_231024	0681_QC401_231024	0681_QC302_231025
				Sampling date / time	23-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-047	EB2333894-048	EB2333894-049	EB2333894-050	EB2333894-051
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	<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		<0.01	<0.01	<0.01	<0.01	<0.01
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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0681_QC300_231023	0681_QC400_231023	0681_QC301_231024	0681_QC401_231024	0681_QC302_231025
				Sampling date / time	23-Oct-2023 00:00	23-Oct-2023 00:00	24-Oct-2023 00:00	24-Oct-2023 00:00	25-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-047	EB2333894-048	EB2333894-049	EB2333894-050	EB2333894-051
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**106**	**104**	**105**	**109**	**108**
13C8-PFOA	----	0.02	%		**81.7**	**81.3**	**71.6**	**77.0**	**87.0**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0681_QC402_231025	0681_QC303_231026	0681_QC403_231026	0681_QC304_231027	0681_QC404_231027
				Sampling date / time	25-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	27-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-052	EB2333894-053	EB2333894-054	EB2333894-057	EB2333894-058
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	<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		<0.01	<0.01	<0.01	<0.01	<0.01
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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0681_QC402_231025	0681_QC303_231026	0681_QC403_231026	0681_QC304_231027	0681_QC404_231027
				Sampling date / time	25-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	27-Oct-2023 00:00	27-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-052	EB2333894-053	EB2333894-054	EB2333894-057	EB2333894-058
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**113**	**113**	**110**	**111**	**110**
13C8-PFOA	----	0.02	%		**83.0**	**82.8**	**85.6**	**95.6**	**90.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0681_QC305_231030	0681_QC405_231030	0861_QC501_231031	0861_QC503_231031	0861_MW56I_231026
				Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	27-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-061	EB2333894-062	EB2333894-063	EB2333894-065	EB2333894-067
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	<0.01	**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		<0.01	<0.01	<0.01	<0.01	**0.01**
Perfluorononane sulfonic acid (PFNS)	----	0.02	µg/L		**----**	**----**	**----**	**----**	<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		<0.02	<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
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0681_QC305_231030	0681_QC405_231030	0861_QC501_231031	0861_QC503_231031	0861_MW56I_231026
				Sampling date / time	27-Oct-2023 00:00	27-Oct-2023 00:00	27-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-061	EB2333894-062	EB2333894-063	EB2333894-065	EB2333894-067
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	<0.01	<0.01	**0.03**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	**0.03**
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	**0.03**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**108**	**110**	**109**	**108**	**91.6**
13C8-PFOA	----	0.02	%		**92.1**	**88.3**	**88.6**	**90.7**	**98.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW005_231028	0861_MW012_231028	0861_MW020_231028	0861_MW025_231028	0861_MW050_231028
				Sampling date / time	30-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00	28-Oct-2023 00:00	28-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-068	EB2333894-069	EB2333894-070	EB2333894-071	EB2333894-072
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	**4.20**	**0.25**	**0.04**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	**6.00**	**0.20**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.04**	<0.01	**48.1**	**1.27**	**0.10**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	**3.39**	**0.05**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	<0.01	**97.7**	**1.09**	**0.22**
Perfluorononane sulfonic acid (PFNS)	----	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	**4.9**	**0.3**	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	**6.85**	**0.39**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	**11.5**	**0.47**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	**3.86**	**0.14**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	**6.16**	**0.15**	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	**0.66**	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.59	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW005_231028	0861_MW012_231028	0861_MW020_231028	0861_MW025_231028	0861_MW050_231028
				Sampling date / time	30-Oct-2023 00:00	30-Oct-2023 00:00	30-Oct-2023 00:00	28-Oct-2023 00:00	28-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333894-068	EB2333894-069	EB2333894-070	EB2333894-071	EB2333894-072
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.59	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.59	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.59	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.59	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.24	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.24	<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	<0.24	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	**0.76**	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.24	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.24	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**0.04**	<0.01	**194**	**4.31**	**0.36**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.04**	<0.01	**146**	**2.36**	**0.32**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.04**	<0.01	**184**	**4.06**	**0.36**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**93.6**	**93.4**	**94.4**	**97.7**	**93.8**
13C8-PFOA	----	0.02	%		**103**	**100**	**102**	**102**	**100**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW049_231023	0681_QC112_231028	0681_QC113_231028	----	----
				Sampling date / time	28-Oct-2023 00:00	28-Oct-2023 00:00	28-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		EB2333894-073	EB2333894-075	EB2333894-076	--------	--------
					Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.14**	<0.02	**3.67**	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.10**	<0.02	**4.74**	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.69**	<0.01	**39.0**	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.04**	<0.02	**2.35**	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**1.12**	<0.01	**79.6**	----	----
Perfluorononane sulfonic acid (PFNS)	----	0.02	µg/L		<0.02	<0.02	**0.43**	----	----
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		**0.2**	<0.1	**2.5**	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.11**	<0.02	**5.19**	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.23**	<0.02	**9.73**	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.04**	<0.02	**3.87**	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.11**	<0.01	**4.78**	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	**0.59**	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	**0.06**	----	----
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	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW049_231023	0681_QC112_231028	0681_QC113_231028	----	----
				Sampling date / time	28-Oct-2023 00:00	28-Oct-2023 00:00	28-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		EB2333894-073	EB2333894-075	EB2333894-076	--------	--------
					Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	**0.78**	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	**0.07**	----	----
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		**2.78**	<0.01	**157**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**1.81**	<0.01	**119**	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**2.64**	<0.01	**149**	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**106**	**94.9**	**91.2**	----	----
13C8-PFOA	----	0.02	%		**104**	**105**	**101**	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2333894**	Page	: 1 of 19
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Order number	: 60612562	Date Analysis Commenced	: 01-Nov-2023
C-O-C number	: ----	Issue Date	: 18-Dec-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
No. of samples received	: 65		
No. of samples analysed	: 65		

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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD
	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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: 5398313)									
EB2333894-001	0861_SD002_231027	EA055: Moisture Content	----	0.1	%	29.1	29.1	0.0	0% - 20%
EB2333894-012	0861_SD021_231023	EA055: Moisture Content	----	0.1	%	15.4	15.2	0.8	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5398324)									
EB2333894-022	0861_SD048_231027	EA055: Moisture Content	----	0.1	%	39.3	39.2	0.3	0% - 20%
EB2333894-033	0861_SD091_231023	EA055: Moisture Content	----	0.1	%	27.0	26.4	2.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5398326)									
EB2333894-039	0681_QC103_231023	EA055: Moisture Content	----	0.1	%	48.1	48.1	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5411242)									
EB2333894-077	0861_SD004_231025	EA055: Moisture Content	----	0.1	%	17.8	17.9	0.6	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5398312)									
EB2333894-001	0861_SD002_231027	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	0.0003	0.0003	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	0.0038	0.0042	8.0	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EB2333894-012	0861_SD021_231023	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0092	0.0088	4.3	0% - 20%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0081	0.0079	2.5	0% - 20%
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0503	0.0515	2.3	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0038	0.0041	5.8	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 (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5398312) - continued									
EB2333894-012	0861_SD021_231023	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002 (0.0005)*	mg/kg	0.337	0.344	2.2	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0235	0.0220	6.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5398323)									
EB2333894-022	0861_SD048_231027	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0003	0.0005	47.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0007	0.0009	30.5	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002 (0.0005)*	mg/kg	0.0086	0.0102	17.2	0% - 50%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0015	0.0012	19.8	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002 (0.0005)*	mg/kg	0.118	0.100	16.6	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0024	0.0026	8.2	0% - 50%
EB2333894-033	0861_SD091_231023	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 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5398325)									
EB2333894-039	0681_QC103_231023	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 (0.0012)*	mg/kg	<0.0006	<0.0012	66.7	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5411241)									
EB2333894-077	0861_SD004_231025	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	0.0003	0.0003	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	0.0054	0.0054	0.0	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5398312)									
EB2333894-001	0861_SD002_231027	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

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: 5398312) - continued									
EB2333894-001	0861_SD002_231027	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 (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
EB2333894-012	0861_SD021_231023	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0060	0.0064	6.8	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0163	0.0167	2.4	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0048	0.0049	2.9	0% - 20%
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0123	0.0130	5.8	0% - 20%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0018	0.0017	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0014	0.0014	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0045	0.0042	7.6	0% - 20%
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0029	0.0029	0.0	0% - 50%
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	0.0051	0.0048	4.7	0% - 20%
		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	0.005	0.004	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5398323)									
EB2333894-022	0861_SD048_231027	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0003	0.0004	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0010	0.0013	27.4	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0005	0.0007	36.8	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0010	0.0014	29.1	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0006	0.0010	46.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0004	0.0006	51.9	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0007	0.0011	47.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0011	0.0016	40.1	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	0.0012	0.0017	37.3	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	0.0012	0.0016	21.7	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EB2333894-033	0861_SD091_231023	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

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: 5398323) - continued									
EB2333894-033	0861_SD091_231023	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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5398325)									
EB2333894-039	0681_QC103_231023	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 (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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5411241)									
EB2333894-077	0861_SD004_231025	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 (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: 5398312)									
EB2333894-001	0861_SD002_231027	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

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: 5398312) - continued									
EB2333894-001	0861_SD002_231027	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
EB2333894-012	0861_SD021_231023	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0136	0.0122	10.7	0% - 20%
		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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5398323)									
EB2333894-022	0861_SD048_231027	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0017	0.0027	47.1	0% - 50%
		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
EB2333894-033	0861_SD091_231023	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

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: 5398323) - continued									
EB2333894-033	0861_SD091_231023	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5398325)									
EB2333894-039	0681_QC103_231023	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5411241)									
EB2333894-077	0861_SD004_231025	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: 5398312)									
EB2333894-001	0861_SD002_231027	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

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 (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5398312) - continued									
EB2333894-001	0861_SD002_231027	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EB2333894-012	0861_SD021_231023	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 (0.0015)*	mg/kg	<0.0015	<0.0015	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5398323)									
EB2333894-022	0861_SD048_231027	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	0.0018	0.0024	28.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	0.0007	0.0008	19.9	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
EB2333894-033	0861_SD091_231023	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5398325)									
EB2333894-039	0681_QC103_231023	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5411241)									
EB2333894-077	0861_SD004_231025	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

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 (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5411241) - continued									
EB2333894-077	0861_SD004_231025	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5398312)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	104	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	108	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	85.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	110	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	104	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	106	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5398323)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	94.1	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	95.3	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	88.1	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	89.5	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	87.9	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	89.6	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5398325)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	116	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	94.9	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	84.7	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	105	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	86.6	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	90.4	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5411241)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	102	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	106	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	103	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	110	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	113	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	115	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5398312)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	105	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	127	69.0	132

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5398312) - continued								
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	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	120	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	110	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	124	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	117	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5398323)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	87.9	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.4	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.8	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.4	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	84.4	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	92.0	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5398325)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	81.9	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	74.4	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.8	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	69.2	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	74.8	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.4	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5411241)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5411241) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	105	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	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	125	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	127	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	106	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398312)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398323)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	89.1	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.9	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.3	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.9	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.4	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398325)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398325) - continued								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	136	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.4	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.8	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	122	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	123	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	131	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5411241)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	112	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398312)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	127	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	109	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	116	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	121	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398323)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	86.3	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	80.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	86.7	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	103	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398325)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	134	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	132	64.0	140

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398325) - continued								
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	127	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	94.6	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5411241)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	110	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	107	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	117	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	121	54.8	124

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	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402776)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	103	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	106	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	112	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	103	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	96.7	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	76.5	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5406617)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	109	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	112	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	110	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	119	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	108	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	107	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402776)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.8	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	114	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	77.7	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	98.1	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	98.2	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	90.4	72.0	134

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402776) - continued								
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	# 258	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	103	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5406617)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	112	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	107	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	112	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	105	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	106	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	126	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	119	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	105	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402776)								
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	# 190	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.8	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	91.1	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	92.6	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5406617)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	105	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	83.6	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	80.2	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	95.8	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.5	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	96.0	65.0	136

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	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5406617) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	116	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402776)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	93.4	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	105	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 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	0.241 µg/L	101	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5406617)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	105	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	113	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	107	64.2	133
EP231P: PFAS Sums (QCLot: 5402776)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----
EP231P: PFAS Sums (QCLot: 5406617)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5398312)							
EB2333894-002	0861_SD003_231027	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	104	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	114	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	98.3	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	115	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	106	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	114	59.0	134

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: 5398323)							
EB2333894-024	0861_SD050_231024	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	107	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	119	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	97.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	105	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	95.0	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5398325)							
EB2333894-041	0681_QC104_231023	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	107	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	122	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	85.6	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	# 170	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	102	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	112	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5398312)							
EB2333894-002	0861_SD003_231027	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	110	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	127	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	110	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	127	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	116	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	108	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	124	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	119	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	116	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	118	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5398323)							
EB2333894-024	0861_SD050_231024	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	99.0	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	104	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	104	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	96.8	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	107	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	114	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	82.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	121	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	108	69.0	133

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: 5398325)							
EB2333894-041	0681_QC104_231023	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	103	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	85.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	100	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	103	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	121	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	73.2	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	95.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	76.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	138	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	128	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398312)							
EB2333894-002	0861_SD003_231027	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	104	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	127	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	107	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	130	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	107	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	121	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	134	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398323)							
EB2333894-024	0861_SD050_231024	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	106	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	105	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	116	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	98.1	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	114	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	90.4	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	106	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5398325)							
EB2333894-041	0681_QC104_231023	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	# 141	48.0	128

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: 5398325) - continued							
EB2333894-041	0681_QC104_231023	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	123	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	93.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	107	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	98.0	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	90.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398312)							
EB2333894-002	0861_SD003_231027	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	123	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	94.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	107	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	127	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398323)							
EB2333894-024	0861_SD050_231024	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	96.6	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	106	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	117	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	102	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5398325)							
EB2333894-041	0681_QC104_231023	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	126	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	91.1	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	# 143	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	126	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2333894**	Page	: 1 of 13
Amendment	: **1**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Site	: ----	Issue Date	: 18-Dec-2023
Sampler	: AECOM	No. of samples received	: 65
Order number	: 60612562	No. of samples analysed	: 65

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.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, 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: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EB2333894--041	0681_QC104_231023	**Perfluoroheptane sulfonic acid (PFHpS)**	375-92-8	170 %	70.0-132%	**Recovery greater than upper data quality objective**
EP231A: Perfluoroalkyl Sulfonic Acids	EB2333894--024	0861_SD050_231024	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231C: Perfluoroalkyl Sulfonamides	EB2333894--041	0681_QC104_231023	**Perfluorooctane sulfonamide (FOSA)**	754-91-6	141 %	48.0-128%	**Recovery greater than upper data quality objective**
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EB2333894--041	0681_QC104_231023	**8:2 Fluorotelomer sulfonic acid (8:2 FTS)**	39108-34-4	143 %	65.0-137%	**Recovery greater than upper data quality objective**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	QC-5402776-002	----	**Perfluorotridecanoic acid (PFTrDA)**	72629-94-8	258 %	65.0-144%	**Recovery greater than upper control limit**
EP231C: Perfluoroalkyl Sulfonamides	QC-5402776-002	----	**N-Methyl perfluorooctane sulfonamide (MeFOSA)**	31506-32-8	190 %	68.0-141%	**Recovery greater than upper control limit**

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	27	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	27	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: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Matrix: **SOIL**

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
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0861_SD021_231023, 0861_SD047_231023, 0861_SD052_231023, 0861_SD088_231023, 0861_SD089_231023, 0861_SD090_231023, 0861_SD091_231023, 0681_QC102_231023, 0681_QC103_231023, 0681_QC104_231023, 0681_QC105_231023, 0681_QC106_231023	**23-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	06-Nov-2023	✓
HDPE Soil Jar (EA055) 0861_SD011_231024, 0861_SD027_231024, 0861_SD030_231024, 0861_SD036_231024, 0861_SD041_231024, 0861_SD050_231024, 0861_SD051_231024, 0861_SD056_231024, 0861_SD094_231024, 0861_SD099_231024, 0861_SD100_231024	**24-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	07-Nov-2023	✓
HDPE Soil Jar (EA055) 0861_SD005_231025, 0861_SD008_231025, 0861_SD009_231025, 0861_SD015_231025, 0861_SD016_231025, 0861_SD018_231025, 0861_SD020_231025, 0861_SD028_231025, 0861_SD034_231025	**25-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	08-Nov-2023	✓
HDPE Soil Jar (EA055) 0861_SD004_231025	**25-Oct-2023**	**----**	----	**----**	**08-Nov-2023**	08-Nov-2023	✓
HDPE Soil Jar (EA055) 0861_SD002_231027, 0861_SD003_231027, 0861_SD037_231027, 0861_SD048_231027, 0861_SD059_231027, 0861_SD076_231027, 0861_QC501_231031	**27-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	10-Nov-2023	✓
HDPE Soil Jar (EA055) 0861_SD033_231030, 0861_QC503_231031	**30-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	13-Nov-2023	✓

Matrix: **SOIL**

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD021_231023, 0861_SD047_231023	**23-Oct-2023**	**02-Nov-2023**	20-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0681_QC103_231023, 0681_QC104_231023, 0681_QC105_231023, 0681_QC106_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD052_231023, 0861_SD088_231023, 0861_SD089_231023, 0861_SD090_231023, 0861_SD091_231023, 0681_QC102_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD011_231024, 0861_SD027_231024, 0861_SD030_231024, 0861_SD036_231024, 0861_SD041_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD050_231024, 0861_SD051_231024, 0861_SD056_231024, 0861_SD094_231024, 0861_SD099_231024, 0861_SD100_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD005_231025, 0861_SD008_231025, 0861_SD009_231025, 0861_SD015_231025, 0861_SD016_231025, 0861_SD018_231025, 0861_SD020_231025, 0861_SD028_231025, 0861_SD034_231025	**25-Oct-2023**	**02-Nov-2023**	22-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD004_231025	**25-Oct-2023**	**08-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	18-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD002_231027, 0861_SD003_231027, 0861_SD037_231027	**27-Oct-2023**	**02-Nov-2023**	24-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC501_231031	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD048_231027, 0861_SD059_231027, 0861_SD076_231027	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD033_231030	**30-Oct-2023**	**02-Nov-2023**	27-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC503_231031	**30-Oct-2023**	**03-Nov-2023**	27-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓

Matrix: **SOIL**

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0861_SD021_231023, 0861_SD047_231023	**23-Oct-2023**	**02-Nov-2023**	20-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0681_QC103_231023, 0681_QC104_231023, 0681_QC105_231023, 0681_QC106_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD052_231023, 0861_SD088_231023, 0861_SD089_231023, 0861_SD090_231023, 0861_SD091_231023, 0681_QC102_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD011_231024, 0861_SD027_231024, 0861_SD030_231024, 0861_SD036_231024, 0861_SD041_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD050_231024, 0861_SD051_231024, 0861_SD056_231024, 0861_SD094_231024, 0861_SD099_231024, 0861_SD100_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD005_231025, 0861_SD008_231025, 0861_SD009_231025, 0861_SD015_231025, 0861_SD016_231025, 0861_SD018_231025, 0861_SD020_231025, 0861_SD028_231025, 0861_SD034_231025	**25-Oct-2023**	**02-Nov-2023**	22-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD004_231025	**25-Oct-2023**	**08-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	18-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD002_231027, 0861_SD003_231027, 0861_SD037_231027	**27-Oct-2023**	**02-Nov-2023**	24-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC501_231031	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD048_231027, 0861_SD059_231027, 0861_SD076_231027	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD033_231030	**30-Oct-2023**	**02-Nov-2023**	27-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC503_231031	**30-Oct-2023**	**03-Nov-2023**	27-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓

Matrix: **SOIL**

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0861_SD021_231023, 0861_SD047_231023	**23-Oct-2023**	**02-Nov-2023**	20-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0681_QC103_231023, 0681_QC104_231023, 0681_QC105_231023, 0681_QC106_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD052_231023, 0861_SD088_231023, 0861_SD089_231023, 0861_SD090_231023, 0861_SD091_231023, 0681_QC102_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD011_231024, 0861_SD027_231024, 0861_SD030_231024, 0861_SD036_231024, 0861_SD041_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD050_231024, 0861_SD051_231024, 0861_SD056_231024, 0861_SD094_231024, 0861_SD099_231024, 0861_SD100_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD005_231025, 0861_SD008_231025, 0861_SD009_231025, 0861_SD015_231025, 0861_SD016_231025, 0861_SD018_231025, 0861_SD020_231025, 0861_SD028_231025, 0861_SD034_231025	**25-Oct-2023**	**02-Nov-2023**	22-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD004_231025	**25-Oct-2023**	**08-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	18-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD002_231027, 0861_SD003_231027, 0861_SD037_231027	**27-Oct-2023**	**02-Nov-2023**	24-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC501_231031	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD048_231027, 0861_SD059_231027, 0861_SD076_231027	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD033_231030	**30-Oct-2023**	**02-Nov-2023**	27-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC503_231031	**30-Oct-2023**	**03-Nov-2023**	27-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓

Matrix: **SOIL**

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD021_231023, 0861_SD047_231023	**23-Oct-2023**	**02-Nov-2023**	20-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0681_QC103_231023, 0681_QC104_231023, 0681_QC105_231023, 0681_QC106_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD052_231023, 0861_SD088_231023, 0861_SD089_231023, 0861_SD090_231023, 0861_SD091_231023, 0681_QC102_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD011_231024, 0861_SD027_231024, 0861_SD030_231024, 0861_SD036_231024, 0861_SD041_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD050_231024, 0861_SD051_231024, 0861_SD056_231024, 0861_SD094_231024, 0861_SD099_231024, 0861_SD100_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD005_231025, 0861_SD008_231025, 0861_SD009_231025, 0861_SD015_231025, 0861_SD016_231025, 0861_SD018_231025, 0861_SD020_231025, 0861_SD028_231025, 0861_SD034_231025	**25-Oct-2023**	**02-Nov-2023**	22-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD004_231025	**25-Oct-2023**	**08-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	18-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD002_231027, 0861_SD003_231027, 0861_SD037_231027	**27-Oct-2023**	**02-Nov-2023**	24-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC501_231031	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD048_231027, 0861_SD059_231027, 0861_SD076_231027	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD033_231030	**30-Oct-2023**	**02-Nov-2023**	27-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC503_231031	**30-Oct-2023**	**03-Nov-2023**	27-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓

Matrix: **SOIL**

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
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0861_SD021_231023, 0861_SD047_231023	**23-Oct-2023**	**02-Nov-2023**	20-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0681_QC103_231023, 0681_QC104_231023, 0681_QC105_231023, 0681_QC106_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD052_231023, 0861_SD088_231023, 0861_SD089_231023, 0861_SD090_231023, 0861_SD091_231023, 0681_QC102_231023	**23-Oct-2023**	**03-Nov-2023**	20-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD011_231024, 0861_SD027_231024, 0861_SD030_231024, 0861_SD036_231024, 0861_SD041_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD050_231024, 0861_SD051_231024, 0861_SD056_231024, 0861_SD094_231024, 0861_SD099_231024, 0861_SD100_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD005_231025, 0861_SD008_231025, 0861_SD009_231025, 0861_SD015_231025, 0861_SD016_231025, 0861_SD018_231025, 0861_SD020_231025, 0861_SD028_231025, 0861_SD034_231025	**25-Oct-2023**	**02-Nov-2023**	22-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD004_231025	**25-Oct-2023**	**08-Nov-2023**	22-Apr-2024	✓	**13-Nov-2023**	18-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD002_231027, 0861_SD003_231027, 0861_SD037_231027	**27-Oct-2023**	**02-Nov-2023**	24-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC501_231031	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD048_231027, 0861_SD059_231027, 0861_SD076_231027	**27-Oct-2023**	**03-Nov-2023**	24-Apr-2024	✓	**09-Nov-2023**	13-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD033_231030	**30-Oct-2023**	**02-Nov-2023**	27-Apr-2024	✓	**12-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_QC503_231031	**30-Oct-2023**	**03-Nov-2023**	27-Apr-2024	✓	**05-Nov-2023**	13-Dec-2023	✓

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 / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0681_QC300_231023,	0681_QC400_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**06-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC301_231024,	0681_QC401_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC302_231025,	0681_QC402_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**06-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC303_231026,	0681_QC403_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC304_231027, 0681_QC305_231030, 0861_QC501_231031	0681_QC404_231027, 0681_QC405_231030,	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**06-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW025_231028, 0861_SW049_231023, 0681_QC113_231028	0861_MW050_231028, 0681_QC112_231028,	**28-Oct-2023**	**09-Nov-2023**	25-Apr-2024	✓	**10-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC503_231031		**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**06-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW56I_231026, 0861_MW012_231028,	0861_MW005_231028, 0861_MW020_231028	**30-Oct-2023**	**09-Nov-2023**	27-Apr-2024	✓	**10-Nov-2023**	27-Apr-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0681_QC300_231023,	0681_QC400_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**06-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC301_231024,	0681_QC401_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC302_231025,	0681_QC402_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**06-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC303_231026,	0681_QC403_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC304_231027, 0681_QC305_231030, 0861_QC501_231031	0681_QC404_231027, 0681_QC405_231030,	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**06-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW025_231028, 0861_SW049_231023, 0681_QC113_231028	0861_MW050_231028, 0681_QC112_231028,	**28-Oct-2023**	**09-Nov-2023**	25-Apr-2024	✓	**10-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC503_231031		**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**06-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW56I_231026, 0861_MW012_231028,	0861_MW005_231028, 0861_MW020_231028	**30-Oct-2023**	**09-Nov-2023**	27-Apr-2024	✓	**10-Nov-2023**	27-Apr-2024	✓

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
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0681_QC300_231023,	0681_QC400_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**06-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC301_231024,	0681_QC401_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC302_231025,	0681_QC402_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**06-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC303_231026,	0681_QC403_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC304_231027, 0681_QC305_231030, 0861_QC501_231031	0681_QC404_231027, 0681_QC405_231030,	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**06-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW025_231028, 0861_SW049_231023, 0681_QC113_231028	0861_MW050_231028, 0681_QC112_231028,	**28-Oct-2023**	**09-Nov-2023**	25-Apr-2024	✓	**10-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC503_231031		**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**06-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW56I_231026, 0861_MW012_231028,	0861_MW005_231028, 0861_MW020_231028	**30-Oct-2023**	**09-Nov-2023**	27-Apr-2024	✓	**10-Nov-2023**	27-Apr-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0681_QC300_231023,	0681_QC400_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**06-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC301_231024,	0681_QC401_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC302_231025,	0681_QC402_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**06-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC303_231026,	0681_QC403_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0681_QC304_231027, 0681_QC305_231030, 0861_QC501_231031	0681_QC404_231027, 0681_QC405_231030,	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**06-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW025_231028, 0861_SW049_231023, 0681_QC113_231028	0861_MW050_231028, 0681_QC112_231028,	**28-Oct-2023**	**09-Nov-2023**	25-Apr-2024	✓	**10-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC503_231031		**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**06-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW56I_231026, 0861_MW012_231028,	0861_MW005_231028, 0861_MW020_231028	**30-Oct-2023**	**09-Nov-2023**	27-Apr-2024	✓	**10-Nov-2023**	27-Apr-2024	✓

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
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
0681_QC300_231023,	0681_QC400_231023	**23-Oct-2023**	**04-Nov-2023**	20-Apr-2024	✓	**06-Nov-2023**	20-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0681_QC301_231024,	0681_QC401_231024	**24-Oct-2023**	**04-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0681_QC302_231025,	0681_QC402_231025	**25-Oct-2023**	**04-Nov-2023**	22-Apr-2024	✓	**06-Nov-2023**	22-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0681_QC303_231026,	0681_QC403_231026	**26-Oct-2023**	**04-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0681_QC304_231027, 0681_QC305_231030, 0861_QC501_231031	0681_QC404_231027, 0681_QC405_231030,	**27-Oct-2023**	**04-Nov-2023**	24-Apr-2024	✓	**06-Nov-2023**	24-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0861_MW025_231028, 0861_SW049_231023, 0681_QC113_231028	0861_MW050_231028, 0681_QC112_231028,	**28-Oct-2023**	**09-Nov-2023**	25-Apr-2024	✓	**10-Nov-2023**	25-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0861_QC503_231031		**30-Oct-2023**	**04-Nov-2023**	27-Apr-2024	✓	**06-Nov-2023**	27-Apr-2024	✓
HDPE (no PTFE) (EP231X)								
0861_MW56I_231026, 0861_MW012_231028,	0861_MW005_231028, 0861_MW020_231028	**30-Oct-2023**	**09-Nov-2023**	27-Apr-2024	✓	**10-Nov-2023**	27-Apr-2024	✓

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	6	46	**13.04**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	42	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	42	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	42	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	42	**7.14**	**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	0	27	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	27	**7.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	27	**7.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	27	**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
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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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	: **EB2333895**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Facsimile	: ----	Facsimile	: + [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Page	: 1 of 2
Order number	: 60612563 3.1	Quote number	: ES2020AECOMAU0024 (SY/139/19 V3_QLD)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 31-Oct-2023 10:24	Issue Date	: 31-Oct-2023
Client Requested Due Date	: 07-Nov-2023	Scheduled Reporting Date	: **07-Nov-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 3.0°C, 3.4°C, 4.7°C - Ice present
Receipt Detail	: HARD ESKIES	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
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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 (28 analytes)
EB2333895-001	26-Oct-2023 00:00	0861_MW054S_231026	✓
EB2333895-002	26-Oct-2023 00:00	0861_MW054D_231026	✓

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]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

DERP ESDAT REPORTS
- EDI Format - ESDAT (ESDAT) Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

CERTIFICATE OF ANALYSIS

Work Order	: **EB2333895**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: ----	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023 10:24
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Nov-2023
C-O-C number	: ----	Issue Date	: 07-Nov-2023 16:38
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	0861_MW054S_231026	0861_MW054D_231026	----	----	----
			Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EB2333895-001	EB2333895-002	--------	--------	--------
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	**0.03**	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.14**	**0.02**	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.13**	**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	<0.02	<0.02	----	----	----
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	<0.01	----	----	----
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW054S_231026	0861_MW054D_231026	----	----	----
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2333895-001	EB2333895-002	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.30**	**0.04**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.27**	**0.04**	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.30**	**0.04**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**67.6**	**95.6**	----	----	----
13C8-PFOA	----	0.02	%		**108**	**106**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2333895**	Page	: 1 of 6
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	[redacted]
Telephone	: ----	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Nov-2023
C-O-C number	: ----	Issue Date	: 07-Nov-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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: 5402807)									
EB2334120-001	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: 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: 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: 5402807)									
EB2334120-001	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5402807)									
EB2334120-001	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: 5402807) - continued									
EB2334120-001	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: 5402807)									
EB2334120-001	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: 5402807)									
EB2334120-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402807)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	118	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	112	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	101	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	77.0	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	110	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	104	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402807)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	119	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	99.1	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	110	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	111	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	107	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	106	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	110	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402807)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	93.7	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	77.8	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	99.4	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	122	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	87.6	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	128	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	127	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402807)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402807) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	109	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	106	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	114	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	130	64.2	133
EP231P: PFAS Sums (QCLot: 5402807)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5402807)							
EB2334120-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	114	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	114	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	102	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	73.2	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	96.0	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	99.8	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5402807)							
EB2334120-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	108	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	112	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	92.0	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	106	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	110	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	105	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	107	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	104	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	99.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	106	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	114	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5402807)							

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: 5402807) - continued							
EB2334120-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	89.3	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	72.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	85.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	114	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	89.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	136	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	133	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5402807)							
EB2334120-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	116	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	95.5	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	96.7	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	114	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2333895**	Page	: 1 of 4
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Site	: ----	Issue Date	: 07-Nov-2023
Sampler	: AECOM	No. of samples received	: 2
Order number	: 60612563 3.1	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, 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 / *Container* / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
0861_MW054S_231026, 0861_MW054D_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X)							
0861_MW054S_231026, 0861_MW054D_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X)							
0861_MW054S_231026, 0861_MW054D_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
0861_MW054S_231026, 0861_MW054D_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
0861_MW054S_231026, 0861_MW054D_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	23-Apr-2024	✓

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	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	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	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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	: **EB2333898**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: + [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Page	: 1 of 3
Order number	: 60612563 3.1	Quote number	: ES2020AECOMAU0024 (SY/139/19 V3_QLD)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 31-Oct-2023 10:24	Issue Date	: 31-Oct-2023
Client Requested Due Date	: 08-Nov-2023	Scheduled Reporting Date	: **08-Nov-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 3.0°C, 3.4°C, 4.7°C - Ice present
Receipt Detail	: HARD ESKIES	No. of samples received / analysed	: 15 / 15

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 be advised that sample "0861_MW056D_231026" was not received at the laboratory (denoted SNR on the scanned COC).**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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 (28 analytes)
EB2333898-004	26-Oct-2023 00:00	0861_SD025_231026	✓	✓
EB2333898-006	24-Oct-2023 00:00	0861_SD026_231024	✓	✓
EB2333898-008	26-Oct-2023 00:00	0861_SD039_231026	✓	✓
EB2333898-010	26-Oct-2023 00:00	0861_SD040_231026	✓	✓
EB2333898-012	26-Oct-2023 00:00	0861_SD043_231026	✓	✓
EB2333898-014	26-Oct-2023 00:00	0861_SD045_231026	✓	✓
EB2333898-016	26-Oct-2023 00:00	0861_SD098_231026	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (28 analytes)
EB2333898-001	26-Oct-2023 00:00	0861_MW056S_231026	✓
EB2333898-003	26-Oct-2023 00:00	0861_SW025_231026	✓
EB2333898-005	24-Oct-2023 00:00	0861_SW026_231024	✓
EB2333898-007	26-Oct-2023 00:00	0861_SW039_231026	✓
EB2333898-009	26-Oct-2023 00:00	0861_SW040_231026	✓
EB2333898-011	26-Oct-2023 00:00	0861_SW043_231026	✓
EB2333898-013	26-Oct-2023 00:00	0861_SW045_231026	✓
EB2333898-015	26-Oct-2023 00:00	0861_SW098_231026	✓

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]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

CERTIFICATE OF ANALYSIS

Work Order	: **EB2333898**	Page	: 1 of 11
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023 10:24
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Nov-2023
C-O-C number	: ----	Issue Date	: 08-Nov-2023 16:33
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
No. of samples received	: 15		
No. of samples analysed	: 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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Soil Preparation, Stafford, QLD

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.
- EP231X - PFAS: The LOR for PFBA have been raised in sample '0861_SW025_231026' (EB2333898-003) and '0861_SW098_231026' (EB2333898-015) due to matrix interference.
- EP231X-PFAS: Particular samples showed matrix interference indicated by internal standard recovery lower than 50%. This is deemed acceptable as all associated analytes are less than the limit of reporting.
- EP231X- PFAS: The LOR for PFHxS have been raised in sample '0861_SD025_231026' (EB2333898-004) due to matrix interference.
- EP231X- PFAS: The LOR for PFOS have been raised in sample '0861_SD039_231026' (EB2333898-008) due to matrix interference.
- EP231X- PFAS: Particular samples required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- 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. 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 (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD025_231026	0861_SD026_231024	0861_SD039_231026	0861_SD040_231026	0861_SD043_231026
				Sampling date / time	26-Oct-2023 00:00	24-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333898-004	EB2333898-006	EB2333898-008	EB2333898-010	EB2333898-012
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**14.6**	**43.5**	**45.8**	**79.4**	**30.3**
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.0004	<0.0005	<0.0002	**0.0004**	<0.0002
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		<0.0002	**0.0240**	<0.0014	**0.0130**	<0.0004
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0012	<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	<0.0002
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		<0.0002	<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		<0.0005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0013	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<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	<0.0002
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	**0.0016**	<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

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD025_231026	0861_SD026_231024	0861_SD039_231026	0861_SD040_231026	0861_SD043_231026
				Sampling date / time	26-Oct-2023 00:00	24-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333898-004	EB2333898-006	EB2333898-008	EB2333898-010	EB2333898-012
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.0002	**0.0256**	<0.0002	**0.0134**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	**0.0240**	<0.0002	**0.0134**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	**0.0240**	<0.0002	**0.0134**	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**112**	**104**	**110**	**121**	**114**
13C8-PFOA	----	0.0002	%		**106**	**88.5**	**102**	**106**	**110**

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD045_231026	0861_SD098_231026	----	----	----
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2333898-014	EB2333898-016	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**70.2**	**18.2**	**----**	**----**	**----**
EP231A: Perfluoroalkyl Sulfonic Acids									
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		**0.0004**	<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		**0.0090**	**0.0012**	**----**	**----**	**----**
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		<0.0010	<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	**----**	**----**	**----**
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	**----**	**----**	**----**

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_SD045_231026	0861_SD098_231026	----	----	----
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2333898-014	EB2333898-016	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.0094**	**0.0012**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0094**	**0.0012**	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0094**	**0.0012**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**102**	**99.5**	----	----	----
13C8-PFOA	----	0.0002	%		**108**	**89.5**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW056S_231026	0861_SW025_231026	0861_SW026_231024	0861_SW039_231026	0861_SW040_231026
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	24-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333898-001	EB2333898-003	EB2333898-005	EB2333898-007	EB2333898-009
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	**0.07**	<0.01	**0.11**
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		**0.01**	<0.01	**0.22**	<0.01	**0.15**
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	<0.2	<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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW056S_231026	0861_SW025_231026	0861_SW026_231024	0861_SW039_231026	0861_SW040_231026
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	24-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		EB2333898-001	EB2333898-003	EB2333898-005	EB2333898-007	EB2333898-009
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.01**	<0.01	**0.29**	<0.01	**0.28**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.01**	<0.01	**0.29**	<0.01	**0.26**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.01**	<0.01	**0.29**	<0.01	**0.28**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**78.9**	**72.4**	**76.8**	**78.8**	**84.5**
13C8-PFOA	----	0.02	%		**107**	**106**	**107**	**107**	**108**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW043_231026	0861_SW045_231026	0861_SW098_231026	----	----
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		EB2333898-011	EB2333898-013	EB2333898-015	--------	--------
					Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	**0.03**	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	**0.03**	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	**0.06**	**0.20**	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	**0.11**	**0.34**	----	----
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	<0.2	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	**0.05**	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	**0.06**	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	**0.02**	----	----
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	----	----
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	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW043_231026	0861_SW045_231026	0861_SW098_231026	----	----
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		EB2333898-011	EB2333898-013	EB2333898-015	--------	--------
					Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	**0.17**	**0.73**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**0.17**	**0.54**	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	**0.17**	**0.70**	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**84.5**	**86.7**	**89.7**	----	----
13C8-PFOA	----	0.02	%		**108**	**102**	**105**	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2333898**	Page	: 1 of 10
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Order number	: 60612563 3.1	Date Analysis Commenced	: 01-Nov-2023
C-O-C number	: ----	Issue Date	: 08-Nov-2023
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3_QLD		
No. of samples received	: 15		
No. of samples analysed	: 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 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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Soil Preparation, Stafford, QLD

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: 5396921)									
EB2333898-004	0861_SD025_231026	EA055: Moisture Content	----	0.1	%	14.6	14.6	0.0	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5396918)									
EB2333898-004	0861_SD025_231026	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	<0.0004	<0.0004	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	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5396918)									
EB2333898-004	0861_SD025_231026	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	<0.0005	<0.0005	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5396918)									
EB2333898-004	0861_SD025_231026	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5396918) - continued									
EB2333898-004	0861_SD025_231026	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: 5396918)									
EB2333898-004	0861_SD025_231026	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 sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5403502)									
EB2334046-026	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: 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: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EB2334107-006	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.19	0.19	0.0	0% - 50%
		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	<0.02	<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: 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: 5403502)									
EB2334046-026	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

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: 5403502) - continued									
EB2334046-026	Anonymous	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EB2334107-006	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.3	<0.1	100	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5403502)									
EB2334046-026	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
EB2334107-006	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: 5403502) - continued									
EB2334107-006	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5403502)									
EB2334046-026	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
EB2334107-006	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: 5403502)									
EB2334046-026	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EB2334107-006	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.23	0.22	4.4	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.23	0.22	4.4	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.23	0.22	4.4	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5396918)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	98.2	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	98.3	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	91.1	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	89.5	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	102	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	95.0	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5396918)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	95.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	74.8	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.8	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.4	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.7	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5396918)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.0	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.9	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.5	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.3	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.2	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5396918)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5396918) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	73.1	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	73.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	107	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	116	54.8	124

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	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5403502)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	119	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	116	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	104	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	111	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	131	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	114	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5403502)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	116	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	124	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	123	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	115	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	120	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	90.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	98.8	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	132	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	141	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	123	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5403502)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	90.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	93.7	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	133	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	120	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	90.2	62.6	138

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	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5403502) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	112	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	91.6	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5403502)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	92.0	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	112	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 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	0.241 µg/L	84.6	64.2	133
EP231P: PFAS Sums (QCLot: 5403502)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5396918)							
EB2333898-006	0861_SD026_231024	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	109	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	99.6	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	86.0	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	96.2	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	130	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5396918)							
EB2333898-006	0861_SD026_231024	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	103	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	90.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	80.4	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	92.4	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	105	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	94.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	90.8	69.0	133

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5396918) - continued							
EB2333898-006	0861_SD026_231024	EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	95.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	128	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	126	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	91.8	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5396918)							
EB2333898-006	0861_SD026_231024	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	84.4	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	103	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	100	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	103	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	96.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	72.4	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	80.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5396918)							
EB2333898-006	0861_SD026_231024	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	73.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	95.0	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	70.8	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5403502)							
EB2334107-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	92.4	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	114	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	95.2	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	107	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	110	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	92.7	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5403502)							
EB2334107-003	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	80.7	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	107	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	111	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	96.6	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	113	71.0	133

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: 5403502) - continued							
EB2334107-003	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	97.1	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	108	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	109	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	83.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	80.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	91.4	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5403502)							
EB2334107-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	111	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	97.9	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	87.8	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	102	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	93.4	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	110	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5403502)							
EB2334107-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	107	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	124	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	112	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	70.4	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2333898**	Page	: 1 of 6
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_23	Date Samples Received	: 31-Oct-2023
Site	: ----	Issue Date	: 08-Nov-2023
Sampler	: AECOM	No. of samples received	: 15
Order number	: 60612563 3.1	No. of samples analysed	: 15

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, 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	EB2333898--006	0861_SD026_231024	**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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0861_SD026_231024	**24-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	07-Nov-2023	✓
HDPE Soil Jar (EA055) 0861_SD025_231026, 0861_SD039_231026, 0861_SD040_231026, 0861_SD043_231026, 0861_SD045_231026, 0861_SD098_231026	**26-Oct-2023**	**----**	----	**----**	**01-Nov-2023**	09-Nov-2023	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD026_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD025_231026, 0861_SD039_231026, 0861_SD040_231026, 0861_SD043_231026, 0861_SD045_231026, 0861_SD098_231026	**26-Oct-2023**	**02-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0861_SD026_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD025_231026, 0861_SD039_231026, 0861_SD040_231026, 0861_SD043_231026, 0861_SD045_231026, 0861_SD098_231026	**26-Oct-2023**	**02-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓

Matrix: **SOIL**

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0861_SD026_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD025_231026, 0861_SD039_231026, 0861_SD040_231026, 0861_SD043_231026, 0861_SD045_231026, 0861_SD098_231026	**26-Oct-2023**	**02-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD026_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD025_231026, 0861_SD039_231026, 0861_SD040_231026, 0861_SD043_231026, 0861_SD045_231026, 0861_SD098_231026	**26-Oct-2023**	**02-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0861_SD026_231024	**24-Oct-2023**	**02-Nov-2023**	21-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓
HDPE Soil Jar (EP231X) 0861_SD025_231026, 0861_SD039_231026, 0861_SD040_231026, 0861_SD043_231026, 0861_SD045_231026, 0861_SD098_231026	**26-Oct-2023**	**02-Nov-2023**	23-Apr-2024	✓	**06-Nov-2023**	12-Dec-2023	✓

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_SW026_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**05-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_231026, 0861_SW025_231026, 0861_SW039_231026, 0861_SW040_231026, 0861_SW043_231026, 0861_SW045_231026, 0861_SW098_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**05-Nov-2023**	23-Apr-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0861_SW026_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**05-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_231026, 0861_SW025_231026, 0861_SW039_231026, 0861_SW040_231026, 0861_SW043_231026, 0861_SW045_231026, 0861_SW098_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**05-Nov-2023**	23-Apr-2024	✓

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X)							
0861_SW026_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**05-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X)							
0861_MW056S_231026, 0861_SW025_231026, 0861_SW039_231026, 0861_SW040_231026, 0861_SW043_231026, 0861_SW045_231026, 0861_SW098_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**05-Nov-2023**	23-Apr-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
0861_SW026_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**05-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X)							
0861_MW056S_231026, 0861_SW025_231026, 0861_SW039_231026, 0861_SW040_231026, 0861_SW043_231026, 0861_SW045_231026, 0861_SW098_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**05-Nov-2023**	23-Apr-2024	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
0861_SW026_231024	**24-Oct-2023**	**03-Nov-2023**	21-Apr-2024	✓	**05-Nov-2023**	21-Apr-2024	✓
HDPE (no PTFE) (EP231X)							
0861_MW056S_231026, 0861_SW025_231026, 0861_SW039_231026, 0861_SW040_231026, 0861_SW043_231026, 0861_SW045_231026, 0861_SW098_231026	**26-Oct-2023**	**03-Nov-2023**	23-Apr-2024	✓	**05-Nov-2023**	23-Apr-2024	✓

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	1	7	14.29	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	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
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	1	7	14.29	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	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	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
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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

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.

Australian Government
Department of Industry, Science and Resources

National Measurement Institute

SAMPLE RECEIPT NOTIFICATION

CUSTOMER DETAILS

Attention: [redacted]

Customer: AECOM AUSTRALIA PTY LTD

Address: [redacted]

Email: [redacted]

Telephone: [redacted]

LABORATORY DETAILS

Lab: National Measurement Institute

Contact: Client Services

Address: [redacted]

Email: [redacted]

Telephone: [redacted]

SAMPLE DETAILS

NMI Job Name: AECO06/231102

Total No. of Samples: 13

LRNs	Estimated Report Date	Customer Sample ID	Lab Sample Description
N23/022974	9-NOV-2023	QC200_231023	WATER 23/10/2023
N23/022975	9-NOV-2023	QC201_231023	WATER 23/10/2023

[redacted]

N23/022976	9-NOV-2023	QC207_231023	WATER 23/10/2023
N23/022977	9-NOV-2023	QC211_231028	WATER 28/10/2023
N23/022978	9-NOV-2023	QC209_231026	WATER 26/10/2023
N23/022979	9-NOV-2023	QC210_231026	WATER 26/10/2023
N23/022980	9-NOV-2023	QC203_231023	SEDIMENT 23/10/2023
N23/022981	9-NOV-2023	QC204_231023	SEDIMENT 23/10/2023
N23/022982	9-NOV-2023	QC205_231023	SEDIMENT 23/10/2023
N23/022983	9-NOV-2023	QC206_231023	SEDIMENT 23/10/2023
N23/022984	9-NOV-2023	QC212_231027	WATER 27/10/2023
N23/022985	9-NOV-2023	QC213_231023	WATER 27/10/2023
N23/023140	9-NOV-2023	QC202_231023	SEDIMENT 23/10/2023

SAMPLE RECEIVED CONDITION

Date samples received:	2-NOV-2023
Sample received in good order:	Yes
NMI Quotation no. provided:	
Client purchase order number:	60612563_3_1
Temperature of samples:	Chilled
Comments:	
Mode of Delivery:	

Additional Terms and Conditions

Incomplete / unclear information about samples or required testing will delay the start of the analysis work.

If you require your Purchase Order (PO) number to be included on our invoice, please provide the number during sample submission and before the completion of work to avoid unnecessary delays and/or additional processing/handling fees.

Alterations to Client requirements requested after commencement of testing may incur charges.

The lodgement of an order or receipt of samples for NMI services referenced in this Sample Receipt Notification constitutes an acceptence of the current version of NMI Terms and Conditions or other applicable Terms referenced in the NMI Quotation. NMI Terms and Conditions are available on the web at https://www.industry.gov.au/client-services/testing-and-analysis-services/chemical-and-biological-analysis-services-terms-and-conditions

REPORT OF ANALYSIS

Client	: [redacted]	**Job No.**	: AECO06/231102
		Quote No.	: QT-02232
		Order No.	: 60612563_3_1
		Date Received	: 02-NOV-2023
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_23		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N23/022980	0861_QC203_231023	SEDIMENT 23/10/2023
N23/022981	0861_QC204_231023	SEDIMENT 23/10/2023
N23/022982	0861Ù_QC205_231023	SEDIMENT 23/10/2023
N23/022983	0861_QC206_231023	SEDIMENT 23/10/2023

Lab Reg No.		N23/022980	N23/022981	N23/022982	N23/022983	
Date Sampled		23-OCT-2023	23-OCT-2023	23-OCT-2023	23-OCT-2023	
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
PFBA (375-22-4)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFPeA (2706-90-3)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFHxA (307-24-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFHpA (375-85-9)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFOA (335-67-1)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFNA (375-95-1)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFDA (335-76-2)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFUdA (2058-94-8)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFDoA (307-55-1)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFTrDA (72629-94-8)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFTeDA (376-06-7)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFHxDA (67905-19-5)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFODA (16517-11-6)	mg/kg	<0.005	<0.005	<0.005	<0.005	NR70
FOUEA (70887-84-2)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFBS (375-73-5)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFPeS (2706-91-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFHxS (355-46-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFHpS (375-92-8)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFOS (1763-23-1)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFNS (68259-12-1)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFDS (335-77-3)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFOSA (754-91-6)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
N-MeFOSA (31506-32-8)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-EtFOSA (4151-50-2)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-MeFOSAA (2355-31-9)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-EtFOSAA(2991-50-6)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-MeFOSE (24448-09-7)	mg/kg	<0.005	<0.005	<0.005	<0.005	NR70

REPORT OF ANALYSIS

Lab Reg No.		N23/022980	N23/022981	N23/022982	N23/022983	
Date Sampled		23-OCT-2023	23-OCT-2023	23-OCT-2023	23-OCT-2023	
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
N-EtFOSE (1691-99-2)	mg/kg	<0.005	<0.005	<0.005	<0.005	NR70
4:2 FTS (757124-72-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
6:2 FTS (27619-97-2)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
8:2 FTS (39108-34-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
10:2 FTS (120226-60-0)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
8:2 diPAP (678-41-1)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFBA (Surrogate Recovery)	%	129	122	122	123	NR70
PFPeA (Surrogate Recovery)	%	110	116	119	121	NR70
PFHxA (Surrogate Recovery)	%	158	119	112	125	NR70
PFHpA (Surrogate Recovery)	%	142	120	122	122	NR70
PFOA (Surrogate Recovery)	%	128	121	114	124	NR70
PFNA (Surrogate Recovery)	%	172	134	126	62	NR70
PFDA (Surrogate Recovery)	%	121	128	122	112	NR70
PFUdA (Surrogate Recovery)	%	55	105	111	61	NR70
PFDoA (Surrogate Recovery)	%	41	76	100	45	NR70
PFTeDA (Surrogate Recovery)	%	74	141	134	103	NR70
PFHxDA (Surrogate Recovery)	%	27	98	121	55	NR70
FOUEA (Surrogate Recovery)	%	37	111	109	71	NR70
PFBS (Surrogate Recovery)	%	171	112	117	142	NR70
PFHxS (Surrogate Recovery)	%	172	126	122	138	NR70
PFOS (Surrogate Recovery)	%	105	125	116	126	NR70
PFOSA (Surrogate Recovery)	%	96	107	113	89	NR70
N-MeFOSA (Surrogate Recovery)	%	37	104	95	55	NR70
N-EtFOSA (Surrogate Recovery)	%	23	51	61	29	NR70
N-MeFOSAA (Surrogate Recovery)	%	95	108	109	123	NR70
N-EtFOSAA (Surrogate Recovery)	%	84	126	123	84	NR70
N-MeFOSE (Surrogate Recovery)	%	35	106	91	63	NR70
N-EtFOSE (Surrogate Recovery)	%	31	72	80	35	NR70
4:2 FTS (Surrogate Recovery)	%	190	110	101	139	NR70
6:2 FTS (Surrogate Recovery)	%	161	121	96	156	NR70
8:2 FTS (Surrogate Recovery)	%	172	117	105	148	NR70
8:2 diPAP (Surrogate Recovery)	%	96	189	194	120	NR70
Dates						
Date extracted		7-NOV-2023	7-NOV-2023	7-NOV-2023	7-NOV-2023	
Date analysed		7-NOV-2023	7-NOV-2023	7-NOV-2023	7-NOV-2023	

REPORT OF ANALYSIS

Lab Reg No.		N23/022980	N23/022981	N23/022982	N23/022983	
Date Sampled		23-OCT-2023	23-OCT-2023	23-OCT-2023	23-OCT-2023	
	Units					Method

[redacted]

09-NOV-2023

Lab Reg No.		N23/022980	N23/022981	N23/022982	N23/022983	
Date Sampled		23-OCT-2023	23-OCT-2023	23-OCT-2023	23-OCT-2023	
	Units					Method
Trace Elements						
Total Solids	%	36.6	52.6	58.8	46.5	NT2_49
Dates						
Date extracted		8-NOV-2023	8-NOV-2023	8-NOV-2023	8-NOV-2023	
Date analysed		9-NOV-2023	9-NOV-2023	9-NOV-2023	9-NOV-2023	

[redacted]

09-NOV-2023

REPORT OF ANALYSIS

Client	[redacted]	**Job No.**	: AECO06/231102
		Quote No.	: QT-02232
		Order No.	: 60612563_3_1
		Date Received	: 02-NOV-2023
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_23		
Your Client Services Manager	[redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N23/023140	0861_QC202_231023	SEDIMENT 23/10/2023

Lab Reg No.		N23/023140				
Date Sampled		23-OCT-2023				
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
PFBA (375-22-4)	mg/kg	<0.002				NR70
PFPeA (2706-90-3)	mg/kg	<0.002				NR70
PFHxA (307-24-4)	mg/kg	<0.001				NR70
PFHpA (375-85-9)	mg/kg	<0.001				NR70
PFOA (335-67-1)	mg/kg	<0.001				NR70
PFNA (375-95-1)	mg/kg	<0.001				NR70
PFDA (335-76-2)	mg/kg	<0.001				NR70
PFUdA (2058-94-8)	mg/kg	<0.002				NR70
PFDoA (307-55-1)	mg/kg	<0.002				NR70
PFTrDA (72629-94-8)	mg/kg	<0.002				NR70
PFTeDA (376-06-7)	mg/kg	<0.002				NR70
PFHxDA (67905-19-5)	mg/kg	<0.002				NR70
PFODA (16517-11-6)	mg/kg	<0.005				NR70
FOUEA (70887-84-2)	mg/kg	<0.001				NR70
PFBS (375-73-5)	mg/kg	<0.001				NR70
PFPeS (2706-91-4)	mg/kg	<0.001				NR70
PFHxS (355-46-4)	mg/kg	<0.001				NR70
PFHpS (375-92-8)	mg/kg	<0.001				NR70
PFOS (1763-23-1)	mg/kg	<0.002				NR70
PFNS (68259-12-1)	mg/kg	<0.001				NR70
PFDS (335-77-3)	mg/kg	<0.001				NR70
PFOSA (754-91-6)	mg/kg	<0.001				NR70
N-MeFOSA (31506-32-8)	mg/kg	<0.002				NR70
N-EtFOSA (4151-50-2)	mg/kg	<0.002				NR70
N-MeFOSAA (2355-31-9)	mg/kg	<0.002				NR70
N-EtFOSAA(2991-50-6)	mg/kg	<0.002				NR70
N-MeFOSE (24448-09-7)	mg/kg	<0.005				NR70
N-EtFOSE (1691-99-2)	mg/kg	<0.005				NR70
4:2 FTS (757124-72-4)	mg/kg	<0.001				NR70
6:2 FTS (27619-97-2)	mg/kg	<0.001				NR70

REPORT OF ANALYSIS

Lab Reg No.		N23/023140				
Date Sampled		23-OCT-2023				
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
8:2 FTS (39108-34-4)	mg/kg	<0.001				NR70
10:2 FTS (120226-60-0)	mg/kg	<0.002				NR70
8:2 diPAP (678-41-1)	mg/kg	<0.002				NR70
PFBA (Surrogate Recovery)	%	124				NR70
PFPeA (Surrogate Recovery)	%	113				NR70
PFHxA (Surrogate Recovery)	%	119				NR70
PFHpA (Surrogate Recovery)	%	114				NR70
PFOA (Surrogate Recovery)	%	118				NR70
PFNA (Surrogate Recovery)	%	118				NR70
PFDA (Surrogate Recovery)	%	121				NR70
PFUdA (Surrogate Recovery)	%	119				NR70
PFDoA (Surrogate Recovery)	%	120				NR70
PFTeDA (Surrogate Recovery)	%	146				NR70
PFHxDA (Surrogate Recovery)	%	129				NR70
FOUEA (Surrogate Recovery)	%	111				NR70
PFBS (Surrogate Recovery)	%	123				NR70
PFHxS (Surrogate Recovery)	%	124				NR70
PFOS (Surrogate Recovery)	%	121				NR70
PFOSA (Surrogate Recovery)	%	110				NR70
N-MeFOSA (Surrogate Recovery)	%	108				NR70
N-EtFOSA (Surrogate Recovery)	%	87				NR70
N-MeFOSAA (Surrogate Recovery)	%	107				NR70
N-EtFOSAA (Surrogate Recovery)	%	122				NR70
N-MeFOSE (Surrogate Recovery)	%	103				NR70
N-EtFOSE (Surrogate Recovery)	%	99				NR70
4:2 FTS (Surrogate Recovery)	%	96				NR70
6:2 FTS (Surrogate Recovery)	%	106				NR70
8:2 FTS (Surrogate Recovery)	%	102				NR70
8:2 diPAP (Surrogate Recovery)	%	186				NR70
Dates						
Date extracted		7-NOV-2023				
Date analysed		7-NOV-2023				

N23/023140
to
N23/022983

PFOS and PFHxS are quantified using a combined branched and linear standard,
linear and branched isomers are totalled for reporting.

[redacted]

All results corrected for labelled surrogate recoveries.

Selected PFAS surrogate recoveries are biased due to matrix effects.
High PFAS surrogate recoveries accepted - results corrected for recovery.

[redacted]

09-NOV-2023

Lab Reg No.		N23/023140				
Date Sampled		23-OCT-2023				
	Units					Method
Trace Elements						
Total Solids	%	67.9				NT2_49
Dates						
Date extracted		8-NOV-2023				
Date analysed		9-NOV-2023				

[redacted]

09-NOV-2023

All results are expressed on a dry weight basis.

REPORT OF ANALYSIS

Client	[redacted]	**Job No.**	: AECO06/231102
		Quote No.	: QT-02232
		Order No.	: 60612563_3_1
		Date Received	: 02-NOV-2023
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_23		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N23/022974	0861_QC200_231023	WATER 23/10/2023
N23/022975	0861_QC201_231023	WATER 23/10/2023
N23/022976	0861_QC207_231023	WATER 23/10/2023
N23/022977	0861_QC211_231028	WATER 28/10/2023

Lab Reg No.			N23/022974	N23/022975	N23/022976	N23/022977	
Date Sampled			23-OCT-2023	23-OCT-2023	23-OCT-2023	28-OCT-2023	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
PFBA (375-22-4)		ug/L	0.35	<0.05	<0.05	<0.05	NR70
PFPeA (2706-90-3)		ug/L	0.41	<0.02	<0.02	<0.02	NR70
PFHxA (307-24-4)		ug/L	2.0	<0.01	<0.01	<0.01	NR70
PFHpA (375-85-9)		ug/L	0.21	<0.01	<0.01	<0.01	NR70
PFOA (335-67-1)		ug/L	0.084	<0.01	<0.01	<0.01	NR70
PFNA (375-95-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDA (335-76-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFUdA (2058-94-8)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDoA (307-55-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFTrDA (72629-94-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFTeDA (376-06-7)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFHxDA (67905-19-5)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFODA (16517-11-6)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
FOUEA (70887-84-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDS (335-77-3)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFPeS (2706-91-4)		ug/L	1.5	<0.01	<0.01	<0.01	NR70
PFHxS (355-46-4)		ug/L	6.4	<0.01	0.020	0.037	NR70
PFHpS (375-92-8)		ug/L	0.037	<0.01	<0.01	<0.01	NR70
PFOS (1763-23-1)		ug/L	0.33	<0.02	<0.02	<0.02	NR70
PFNS (68259-12-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFBS (375-73-5)		ug/L	2.1	<0.01	<0.01	<0.01	NR70
PFOSA (754-91-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSA (31506-32-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-EtFOSA (4151-50-2)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-MeFOSAA (2355-31-9)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-EtFOSAA(2991-50-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSE (24448-09-7)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70

REPORT OF ANALYSIS

Lab Reg No.		Units	N23/022974	N23/022975	N23/022976	N23/022977	Method
Date Sampled			23-OCT-2023	23-OCT-2023	23-OCT-2023	28-OCT-2023	
PFAS (per-and poly-fluoroalkyl substances)							
N-EtFOSE (1691-99-2)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
4:2 FTS (757124-72-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
6:2 FTS (27619-97-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 FTS (39108-34-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
10:2 FTS (120226-60-0)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 diPAP (678-41-1)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFBA (Surrogate Recovery)		%	107	114	112	111	NR70
PFPeA (Surrogate Recovery)		%	116	155	117	112	NR70
PFHxA (Surrogate Recovery)		%	112	103	103	117	NR70
PFHpA (Surrogate Recovery)		%	109	110	104	109	NR70
PFOA (Surrogate Recovery)		%	107	114	109	114	NR70
PFNA (Surrogate Recovery)		%	103	90	98	105	NR70
PFDA (Surrogate Recovery)		%	107	90	94	103	NR70
PFUdA (Surrogate Recovery)		%	94	72	86	95	NR70
PFDoA (Surrogate Recovery)		%	99	68	88	99	NR70
PFTeDA (Surrogate Recovery)		%	88	78	86	91	NR70
PFHxDA (Surrogate Recovery)		%	116	107	107	128	NR70
FOUEA (Surrogate Recovery)		%	93	87	87	95	NR70
PFBS (Surrogate Recovery)		%	96	110	108	117	NR70
PFHxS (Surrogate Recovery)		%	98	111	116	125	NR70
PFOS (Surrogate Recovery)		%	109	112	114	109	NR70
PFOSA (Surrogate Recovery)		%	90	66	78	89	NR70
N-MeFOSA (Surrogate Recovery)		%	84	64	78	97	NR70
N-EtFOSA (Surrogate Recovery)		%	84	59	73	98	NR70
N-MeFOSAA (Surrogate Recovery)		%	93	60	70	84	NR70
N-EtFOSAA (Surrogate Recovery)		%	96	63	81	91	NR70
N-MeFOSE (Surrogate Recovery)		%	99	72	86	107	NR70
N-EtFOSE (Surrogate Recovery)		%	89	64	78	103	NR70
4:2 FTS (Surrogate Recovery)		%	96	116	97	104	NR70
6:2 FTS (Surrogate Recovery)		%	93	84	86	99	NR70
8:2 FTS (Surrogate Recovery)		%	88	71	91	90	NR70
8:2 diPAP (Surrogate Recovery)		%	71	72	62	69	NR70
Dates							
Date extracted			7-NOV-2023	7-NOV-2023	7-NOV-2023	7-NOV-2023	
Date analysed			7-NOV-2023	7-NOV-2023	7-NOV-2023	7-NOV-2023	

N23/022974
to
N23/022985

REPORT OF ANALYSIS

PFOS and PFHxS are quantified using a combined branched and linear standard,
linear and branched isomers are totalled for reporting.
All results corrected for labelled surrogate recoveries.

Selected PFAS surrogate recoveries are biased due to matrix effects.
High PFAS surrogate recoveries accepted - results corrected for recovery.

[redacted]

09-NOV-2023

REPORT OF ANALYSIS

Report No. RN1410504

Client	[redacted]	**Job No.**	: AECO06/231102
		Quote No.	: QT-02232
		Order No.	: 60612563_3_1
		Date Received	: 02-NOV-2023
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_23		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N23/022978	0861_QC209_231026	WATER 26/10/2023
N23/022979	0861_QC210_231026	WATER 26/10/2023
N23/022984	0861_QC212_231027	WATER 27/10/2023
N23/022985	0861_QC213_231023	WATER 27/10/2023

Lab Reg No.			N23/022978	N23/022979	N23/022984	N23/022985	
Date Sampled			26-OCT-2023	26-OCT-2023	27-OCT-2023	27-OCT-2023	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
PFBA (375-22-4)		ug/L	0.13	<0.05	<0.05	1.6	NR70
PFPeA (2706-90-3)		ug/L	0.14	<0.02	<0.02	5.4	NR70
PFHxA (307-24-4)		ug/L	0.46	0.032	<0.01	9.0	NR70
PFHpA (375-85-9)		ug/L	0.063	<0.01	<0.01	2.7	NR70
PFOA (335-67-1)		ug/L	0.11	<0.01	<0.01	4.2	NR70
PFNA (375-95-1)		ug/L	<0.01	<0.01	<0.01	0.63	NR70
PFDA (335-76-2)		ug/L	<0.01	<0.01	<0.01	0.058	NR70
PFUdA (2058-94-8)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDoA (307-55-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFTrDA (72629-94-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFTeDA (376-06-7)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFHxDA (67905-19-5)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFODA (16517-11-6)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
FOUEA (70887-84-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDS (335-77-3)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFPeS (2706-91-4)		ug/L	0.37	0.046	<0.01	4.4	NR70
PFHxS (355-46-4)		ug/L	2.7	0.57	<0.01	37	NR70
PFHpS (375-92-8)		ug/L	0.12	0.030	<0.01	1.9	NR70
PFOS (1763-23-1)		ug/L	4.8	0.81	<0.02	80	NR70
PFNS (68259-12-1)		ug/L	<0.01	<0.01	<0.01	0.060	NR70
PFBS (375-73-5)		ug/L	0.43	0.048	<0.01	3.5	NR70
PFOSA (754-91-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSA (31506-32-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-EtFOSA (4151-50-2)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-MeFOSAA (2355-31-9)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-EtFOSAA(2991-50-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSE (24448-09-7)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70

REPORT OF ANALYSIS

Lab Reg No.			N23/022978	N23/022979	N23/022984	N23/022985	
Date Sampled			26-OCT-2023	26-OCT-2023	27-OCT-2023	27-OCT-2023	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
N-EtFOSE (1691-99-2)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
4:2 FTS (757124-72-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
6:2 FTS (27619-97-2)		ug/L	<0.01	<0.01	<0.01	0.68	NR70
8:2 FTS (39108-34-4)		ug/L	<0.01	<0.01	<0.01	0.079	NR70
10:2 FTS (120226-60-0)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 diPAP (678-41-1)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFBA (Surrogate Recovery)		%	112	117	120	103	NR70
PFPeA (Surrogate Recovery)		%	111	117	112	127	NR70
PFHxA (Surrogate Recovery)		%	108	132	127	78	NR70
PFHpA (Surrogate Recovery)		%	109	119	114	93	NR70
PFOA (Surrogate Recovery)		%	114	128	110	104	NR70
PFNA (Surrogate Recovery)		%	95	101	108	51	NR70
PFDA (Surrogate Recovery)		%	97	106	108	91	NR70
PFUdA (Surrogate Recovery)		%	88	98	98	79	NR70
PFDoA (Surrogate Recovery)		%	88	101	102	77	NR70
PFTeDA (Surrogate Recovery)		%	83	95	100	76	NR70
PFHxDA (Surrogate Recovery)		%	96	143	120	106	NR70
FOUEA (Surrogate Recovery)		%	80	101	99	88	NR70
PFBS (Surrogate Recovery)		%	112	127	130	106	NR70
PFHxS (Surrogate Recovery)		%	109	127	120	75	NR70
PFOS (Surrogate Recovery)		%	113	121	114	107	NR70
PFOSA (Surrogate Recovery)		%	73	90	100	63	NR70
N-MeFOSA (Surrogate Recovery)		%	72	93	97	73	NR70
N-EtFOSA (Surrogate Recovery)		%	69	93	89	69	NR70
N-MeFOSAA (Surrogate Recovery)		%	72	97	99	67	NR70
N-EtFOSAA (Surrogate Recovery)		%	73	94	100	74	NR70
N-MeFOSE (Surrogate Recovery)		%	79	107	111	77	NR70
N-EtFOSE (Surrogate Recovery)		%	72	96	99	71	NR70
4:2 FTS (Surrogate Recovery)		%	105	97	101	168	NR70
6:2 FTS (Surrogate Recovery)		%	105	91	92	124	NR70
8:2 FTS (Surrogate Recovery)		%	81	86	88	90	NR70
8:2 diPAP (Surrogate Recovery)		%	69	99	71	56	NR70
Dates							
Date extracted			7-NOV-2023	7-NOV-2023	7-NOV-2023	7-NOV-2023	
Date analysed			7-NOV-2023	7-NOV-2023	7-NOV-2023	7-NOV-2023	

REPORT OF ANALYSIS

Lab Reg No.			N23/022978	N23/022979	N23/022984	N23/022985	
Date Sampled			26-OCT-2023	26-OCT-2023	27-OCT-2023	27-OCT-2023	
		Units					Method

[redacted]

09-NOV-2023

NATA ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing.
This report shall not be reproduced except in full.
Results relate only to the sample(s) as received and tested.

This Report supersedes reports: *RN1410478*

Measurement Uncertainty is available upon request.

Note: Sampling date(s) have been provided by the client.
The testing was undertaken at: [redacted]

[redacted]

Australian Government

National Measurement Institute

QUALITY ASSURANCE REPORT

Client: AECOM AUSTRALIA PTY LTD

NMI QA Report No: AECO06/231102 **Sample Matrix:** Liquid

Analyte	Method	LOR	Blank	Sample Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		ug/L	ug/L	ug/L	ug/L	%	%	%
PFBA (375-22-4)	NR70	0.05	<0.05	NA	NA	NA	134	NA
PFPeA (2706-90-3)	NR70	0.02	<0.02	NA	NA	NA	126	NA
PFHxA (307-24-4)	NR70	0.01	<0.01	NA	NA	NA	121	NA
PFHpA (375-85-9)	NR70	0.01	<0.01	NA	NA	NA	115	NA
PFOA (335-67-1)	NR70	0.01	<0.01	NA	NA	NA	124	NA
PFNA (375-95-1)	NR70	0.01	<0.01	NA	NA	NA	131	NA
PFDA (335-76-2)	NR70	0.01	<0.01	NA	NA	NA	115	NA
PFUdA (2058-94-8)	NR70	0.01	<0.01	NA	NA	NA	119	NA
PFDoA (307-55-1)	NR70	0.01	<0.01	NA	NA	NA	125	NA
PFTrDA (72629-94-8)	NR70	0.02	<0.02	NA	NA	NA	123	NA
PFTeDA (376-06-7)	NR70	0.02	<0.02	NA	NA	NA	137	NA
PFHxDA (67905-19-5)	NR70	0.02	<0.02	NA	NA	NA	119	NA
PFODA (16517-11-6)	NR70	0.05	<0.05	NA	NA	NA	103	NA
FOUEA (70887-84-2)	NR70	0.01	<0.01	NA	NA	NA	135	NA
PFBS (375-73-5)	NR70	0.01	<0.01	NA	NA	NA	124	NA
PFPeS (2706-91-4)	NR70	0.01	<0.01	NA	NA	NA	117	NA
PFHxS (355-46-4)	NR70	0.01	<0.01	NA	NA	NA	125	NA
PFHpS (375-92-8)	NR70	0.01	<0.01	NA	NA	NA	119	NA
PFOS (1763-23-1)	NR70	0.02	<0.02	NA	NA	NA	110	NA
PFNS (68259-12-1)	NR70	0.01	<0.01	NA	NA	NA	122	NA
PFDS (335-77-3)	NR70	0.01	<0.01	NA	NA	NA	121	NA
PFOSA (754-91-6)	NR70	0.01	<0.01	NA	NA	NA	126	NA
N-MeFOSA (31506-32-8)	NR70	0.02	<0.02	NA	NA	NA	120	NA
N-EtFOSA (4151-50-2)	NR70	0.02	<0.02	NA	NA	NA	123	NA
N-MeFOSAA (2355-31-9)	NR70	0.01	<0.01	NA	NA	NA	137	NA
N-EtFOSAA(2991-50-6)	NR70	0.01	<0.01	NA	NA	NA	131	NA
N-MeFOSE (24448-09-7)	NR70	0.05	<0.05	NA	NA	NA	111	NA
N-EtFOSE (1691-99-2)	NR70	0.05	<0.05	NA	NA	NA	127	NA
4:2 FTS (757124-72-4)	NR70	0.01	<0.01	NA	NA	NA	121	NA
6:2 FTS (27619-97-2)	NR70	0.01	<0.01	NA	NA	NA	111	NA
8:2 FTS (39108-34-4)	NR70	0.01	<0.01	NA	NA	NA	133	NA
10:2 FTS (120226-60-0)	NR70	0.01	<0.01	NA	NA	NA	121	NA
8:2 diPAP (678-41-1)	NR70	0.02	<0.02	NA	NA	NA	120	NA

Results expressed in percentage (%) or ug/L wherever appropriate.
Acceptable Spike recovery is 50-150%.
Maximum acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.

Signed: [redacted]

Date:

Australian Government

National Measurement Institute

QUALITY ASSURANCE REPORT

Client: AECOM AUSTRALIA PTY LTD

NMI QA Report No: AECO06/231102 **Sample Matrix:** Solid

Analyte	Method	LOR	Blank	Sample Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		mg/kg	mg/kg	mg/kg	mg/kg	%	%	%
PFBA (375-22-4)	NR70	0.002	<0.002	NA	NA	NA	113	NA
PFPeA (2706-90-3)	NR70	0.002	<0.002	NA	NA	NA	106	NA
PFHxA (307-24-4)	NR70	0.001	<0.001	NA	NA	NA	104	NA
PFHpA (375-85-9)	NR70	0.001	<0.001	NA	NA	NA	100	NA
PFOA (335-67-1)	NR70	0.001	<0.001	NA	NA	NA	103	NA
PFNA (375-95-1)	NR70	0.001	<0.001	NA	NA	NA	109	NA
PFDA (335-76-2)	NR70	0.001	<0.001	NA	NA	NA	103	NA
PFUdA (2058-94-8)	NR70	0.002	<0.002	NA	NA	NA	105	NA
PFDoA (307-55-1)	NR70	0.002	<0.002	NA	NA	NA	106	NA
PFTrDA (72629-94-8)	NR70	0.002	<0.002	NA	NA	NA	105	NA
PFTeDA (376-06-7)	NR70	0.002	<0.002	NA	NA	NA	104	NA
PFHxDA (67905-19-5)	NR70	0.002	<0.002	NA	NA	NA	102	NA
PFODA (16517-11-6)	NR70	0.005	<0.005	NA	NA	NA	100	NA
FOUEA (70887-84-2)	NR70	0.001	<0.001	NA	NA	NA	123	NA
PFBS (375-73-5)	NR70	0.001	<0.001	NA	NA	NA	101	NA
PFPeS (2706-91-4)	NR70	0.001	<0.001	NA	NA	NA	103	NA
PFHxS (355-46-4)	NR70	0.001	<0.001	NA	NA	NA	108	NA
PFHpS (375-92-8)	NR70	0.001	<0.001	NA	NA	NA	107	NA
PFOS (1763-23-1)	NR70	0.002	<0.002	NA	NA	NA	116	NA
PFNS (68259-12-1)	NR70	0.001	<0.001	NA	NA	NA	110	NA
PFDS (335-77-3)	NR70	0.001	<0.001	NA	NA	NA	109	NA
PFOSA (754-91-6)	NR70	0.001	<0.001	NA	NA	NA	112	NA
N-MeFOSA (31506-32-8)	NR70	0.002	<0.002	NA	NA	NA	103	NA
N-EtFOSA (4151-50-2)	NR70	0.002	<0.002	NA	NA	NA	102	NA
N-MeFOSAA (2355-31-9)	NR70	0.002	<0.002	NA	NA	NA	108	NA
N-EtFOSAA(2991-50-6)	NR70	0.002	<0.002	NA	NA	NA	114	NA
N-MeFOSE (24448-09-7)	NR70	0.005	<0.005	NA	NA	NA	107	NA
N-EtFOSE (1691-99-2)	NR70	0.005	<0.005	NA	NA	NA	100	NA
4:2 FTS (757124-72-4)	NR70	0.001	<0.001	NA	NA	NA	113	NA
6:2 FTS (27619-97-2)	NR70	0.001	<0.001	NA	NA	NA	106	NA
8:2 FTS (39108-34-4)	NR70	0.001	<0.001	NA	NA	NA	102	NA
10:2 FTS (120226-60-0)	NR70	0.002	<0.002	NA	NA	NA	101	NA
8:2 diPAP (678-41-1)	NR70	0.002	<0.002	NA	NA	NA	108	NA

Results expressed in percentage (%) or mg/kg wherever appropriate.
Acceptable Spike recovery is 50-150%.
Maximum acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.

Signed: [redacted]

Date:

[redacted]

Appendix F

Equipment Calibration Certificates

Appendix F Equipment Calibration Certificates

Oil / Water Interface Meter

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Instrument Geotech Interface Meter (50M)
Serial No. 3883

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested

Calibrated by: [redacted]

Calibration date: 19/10/2023

Next calibration due: 18/12/2023

Multi Parameter Water Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument YSI Quatro Pro Plus
Serial No. 18J104332

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4 D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications.

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		399304	pH 7.00
2. pH 4.00		pH 4.00		399527	pH 4.00
3. ORP		233.62mV		401305/395783	233.84mV
4. EC		2760uS		396172	2775uS
5. D.O		100%		Fresh Air	99.2% - 752.8mmHg
6. Temp		22.8°C		MultiTherm 09000528	22.8°C

Calibrated by: [redacted]

Calibration date: 19-Oct-23

Next calibration due: 18/11/2023

Oil / Water Interface Meter

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Instrument **Interface Meter (60M)**
Serial No. **463919**

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: [redacted]

Calibration date: **27-Nov-23**

Next calibration due: **29/05/2024**

Multi Parameter Water Meter

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Instrument YSI Quatro Pro Plus
Serial No. 10D101443

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1 pH	✓	
	2 mV	✓	
	3 EC	✓	
	4 D.O	✓	
	5 Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1 pH 7.00		pH 7.0		406263	pH 7.0
2 pH 4.00		pH 4.0		405966	pH 4.0
3. ORP		231.86mV		393379/357811	234.5mV
4. EC		2760uS		406852	2781uS
5. D.O		100%		water	101% - 751.8mmHg
6. Temp		23.7oC		MultiTherm	22.5oC

Calibrated by: [redacted]

Calibration date: 27-Nov-23

Next calibration due: 27/12/2023

ANZ

FQM - Water Quality Meter Calibration Record

Q4AM(EV)-410-FM1

Project Name:	PFAS OMP	**Project Number:**	60612583
Project Location:	[redacted]	Client:	Defence
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:	AIRMET
Make and Model:	YSI PRO PLUS
Serial Number:	19J104332

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibrator Standard Concentration:					
Calibrator Reading					
Calibrator Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibrator Standard Concentration:	4	7	2760	0	—
Bump Test Reading.	3.95	6.98	2732	0.03	—
Bump Test Temperature	23.2	22.9	23.0	23.1	—

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each additional [redacted] ried daily and bump tested as required by fieldwork staff

23.10.23
Date

Distribution: Project Compliance

ANZ

FQM - Water Quality Meter Calibration Record

Q4ANEV)-416-FM1

Project Name:	PFAS OMP	**Project Number:**	60612563
Project Location:	[redacted]	Client:	Defence
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	AIRNET
Make and Model:	YSI PRO PLUS
Serial Number	18J104332

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
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					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7	2760	0	—
Bump Test Reading:	4.01	6.98	2702	0.2	—
Bump Test Temperature	20.2	21.1	20.9	20.9	—

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual [redacted] and bump tested as required by fieldwork staff

[redacted] — Fieldwork Staff Signature

24/10/23 — Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

QAAN(EV)-410-FM1

Project Name:	PFAS CMP	Project Number:	60612583
Project Location:	[redacted]	Client:	Defence
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:	AQUALAB
Make and Model:	YSI PRO PLUS
Serial Number:	

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibrator Standard Concentration:					
Calibration Reading					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time	25/10				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibrator Standard Concentration:	4	7	2760	0	
Bump Test: Reading	3.97	6.99	2733	0.2	
Bump Test: Temperature	21.3	21.2	21.1	21.1	

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided

Approval and Distribution

☑ Each individual [redacted] daily and bump tests/calibrations as required by fieldwork SOP

[redacted] 25/10/23
Date

Distribution: Project Control File

ANZ

FQM - Water Quality Meter Calibration Record

QAN(EV)-410-FM1

Project Name:	PFAS QMP	Project Number:	60612563
Project Location:	[redacted]	Client:	Defence
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:	AIRMET
Make and Model:	YSI PRO PLUS
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:					
Calibration Reading:					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time	26/10/23 6:00 AM				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7	2760	0	
Bump Test Reading	3.97	6.96	2745	0.3	
Bump Test Temperature.	19.3	18.6	18.6	18.5	

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual instr[redacted]oted daily and bump tested as required by fieldwork staff

[redacted] 26/10/23

Date

Distribution: Project Quality File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS ONP	Project Number:	60612563
Project Location:	[redacted]	Client:	Defence
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	AIRMET
Make and Model:	YSI PRO PLUS
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					
Calibration Reading:					
Calibration Temperature					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:	27/10/23 6:10 AM				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4	7	2760	0	
Bump Test Reading	4.01	6.99	2743	0.2	
Bump Test Temperature	18.6	18.5	18.8	18.8	

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual nsu[redacted] daily and bump tested as required by fieldwork staff.

[redacted] — 27/10/23 (Date)

Distribution: Project Central File

AECOM

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS OMP	**Project Number:**	608 2683
Project Location:	[redacted]	**Client:**	Defence
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:	YSI
Make and Model:	XSI PRO PLUS
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:					
Calibration Reading:					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:	30.10.23 8:00 AM				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4	7	2760	0	
Bump Test Reading	3.97	7.01	2745	0.2	
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual instrument [redacted] daily and bump tested as required by fieldwork staff

Fi[redacted] — Date: 30/10/23

Distribution: Project Cent[redacted]

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS OMP	Project Number:	60612563
Project Location:	[redacted]	Client:	Defence
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	AIRMET
Make and Model	YSI QUATRO PRO PLUS
Serial Number	10D101443

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
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:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4	7	2760	0%	
Bump Test Reading	3.98	6.96	2731	0.1	
Bump Test Temperature	20.2	20.3	20.1	20.2	

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual i[redacted]ested daily and bump tested as required by fieldwork staff.

[redacted] 29/11/23

Date

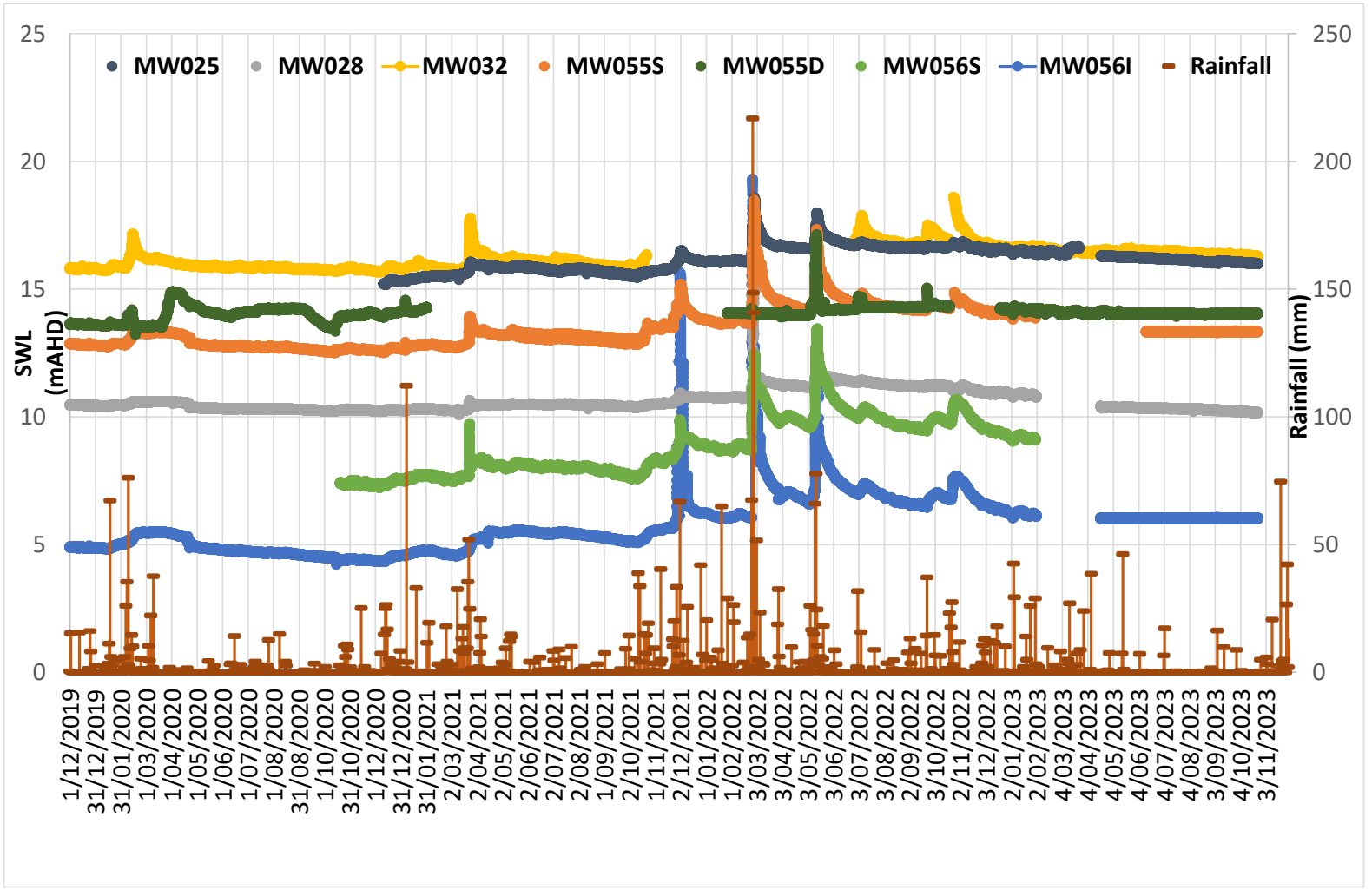
Distribution: Project Central File

Appendix G

Groundwater Level Data

Appendix G Groundwater Level Data

Chart G1 Groundwater Elevations and Rainfall December 2019 to October 2023



Prepared for
Department of Defence
ABN: 68706814312

Sampling Event Factual Report, April / May 2024

PFAS OMP - RAAF Base Amberley

13-Jun-2024
Doc No. 60612563_RP_097_3_240613

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Sampling Event Factual Report, April / May 2024

PFAS OMP - RAAF Base Amberley

Client: Department of Defence

ABN: 68706814312

13-Jun-2024

Job No.: 60612563

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 and ISO45001.

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Prepared by	Bonnie Rose and Sam Brown
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Abbreviations

Abbreviation	
AECOM	AECOM Australia Pty Ltd
AFFF	Aqueous Fire Forming Foam
ALS	Australian Laboratory Services
ANZG	Australian and New Zealand Guidelines
ASC NEPM	Assessment of Site Contamination National Environment Protection Measure 1999 (as amended 2013)
BoM	Bureau of Meteorology
COC	Chain of custody
CPSA	Confirmed Primary Source Area
Defence	Department of Defence
DO	Dissolved oxygen
EC	Electrical conductivity
FTA	Fire Training Area
HEPA	Heads of Environmental Protection Agencies
IP	Interface probe
LOR	Limit of reporting
NATA	National Association of Testing Authorities
NEMP	National Environmental Management Plan
NHMRC	National Health and Medical Research Council
NMI	National Measurement Institute
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation-reduction potential
PFAS	Per- and poly-fluoroalkyl substances
PFHxS	Perfluorohexane sulfonate
PFOA	Perflurooctanoic acid
PFOS	Perflurooctanesulfonic acid
PMAP	PFAS Management Area Plan
QA / QC	Quality Assurance / Quality Control
RAAF	Royal Australian Air Force
QLD	Queensland
RPD	Relative percent difference
SAQP	Sampling analysis and quality plan
UST	Underground storage tank

Units of Measurement			
L	Litres	m	Metre
mg	Milligram	mm	Millimetre
kg	Kilogram	ha	Hectares
mV	Millivolts	S	Siemens
µg	Microgram	cm	Centimetre
mAHD	Metres Australian height datum	mbtoc	Metres below top of casing
°C	Degrees Celsius		

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) (Defence, 2020) at the Royal Australian Air Force (RAAF) Base Amberley (the 'Base') and the Management Area in the South Queensland Region. The locations of the Base and Management Area are shown on **Figure 1** in **Appendix A**.

The OMP for RAAF Base Amberley (Defence, 2020) includes the following sampling events:

- Biannual groundwater, surface water and sediment sampling in April and October in 2020, 2021, and 2022.

In July 2022, Defence extended the period for the OMP sampling events by two years with additional groundwater sampling events scheduled for April 2023, October 2023 and April 2024.

Following each biannual sampling event, sampling event factual reports will be prepared. Ongoing monitoring reports (OMRs) will be prepared following the completion of each 12-month sampling period. This sampling event factual report has been prepared to report the results of the biannual sampling event completed in April / May 2024[1], specifically highlighting first-time detections and / or new exceedances of human health screening criteria for perflurooctanesulfonic acid (PFOS) + perfluorohexane sulfonate (PFHxS) and / or perflurooctanoic acid (PFOA).

This report has been prepared in accordance with the *PFAS OMP Factual Report Guidance,* v0.2, May 2021 (Defence, 2021).

1.2 Objectives

The objectives of the OMP are to:

- Implement the OMP prepared as part of the PFAS Management Area Plan (PMAP) (Defence, 2020); and
- Collect data that will enable Defence to maintain an up to date understanding of the distribution, concentration and transport of PFAS at RAAF Base Amberley.

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 PMAP.

The objective of this phase of works was to implement the scope of work for the April / May 2024 sampling event in general accordance with the sampling analysis and quality plan (SAQP) (AECOM, 2024a).

[1] Due to issues accessing some sampling locations in April 2024, a return visit was made approximately two weeks later in May to collect outstanding samples. Consequently, the sampling event is referred to as the April / May Sampling Event.

2.0 Scope of Work

The sampling event at RAAF Base Amberley was completed in general accordance with the SAQP (AECOM, 2024a). In summary, the scope of work for this sampling event included:

- Obtaining access to private properties where some groundwater sampling locations are situated.
- Review of the SAQP prior to the monitoring event to ensure compliance with the following:
  - PFAS National Environmental Management Plan (NEMP) V2.0 [Heads of Environmental Protection Agencies (HEPA), 2020];
  - National Environment Protection (Assessment of Site Contamination) Measure 1999, Schedule B1, as amended in 2013 (ASC NEPM, 2013);
  - Defence Routine Environment Water Quality Monitoring Manual, 2018;
  - Defence, Contamination Management Manual, 2018 amended 2021;
  - AS / NZ 5667:1998 Water quality – Sampling (Standards Australia 1998);
  - Australian and New Zealand Guidelines (ANZG) for Fresh and Marine Water Quality (ANZG, 2018);
  - Relevant State regulatory guidelines.
- Gauging of groundwater elevation in 38 of 40 monitoring wells prior to collection of samples (refer to **Table 1** below, and **Figure 2** in **Appendix A** for specific locations). Monitoring well (MW049) was not found and could not be gauged, refer to **Table 8** for more details. A second well, MW021, was flooded and not accessible.
- Collection of groundwater samples at 38 of 40 locations including 32 on-Base monitoring wells and six off-Base monitoring well locations. Details are included in **Table 1** below and **Figure 2** in **Appendix A**. Two monitoring well (MW049 and MW021) were not sampled as they were not accessible, refer to **Table 8** for more details.
- Collection of co-located surface water and sediment samples at 49 locations, including 42 on-Base locations, and seven off-Base locations (refer below to **Table 2** and **Table 3** and **Figure 3** in **Appendix A**). One location (SW/SD048) was dry with no sediment present and three other locations (SW033, SW038, SW067) were dry and no water samples could be collected. Consequently, 48 sediment samples and 45 surface water samples were collected and analysed. Refer to **Table 8** for more details.
- Downloading groundwater level data from data loggers installed in seven groundwater monitoring wells (MW025, MW028, MW032, MW055S, MW055D, MW056S, MW056I), refer to **Figure 2** in **Appendix A** for data logger locations. Partial data (until November 2023) was downloaded from one datalogger (MW055D), refer to **Table 8** for more details.
- Collection of intra- and inter- laboratory duplicate samples at a rate of 1 in 10 primary samples, one field blank sample per day, one rinsate sample per fieldwork day and one trip blank per batch.
- Analysis of all samples for the PFAS suite at the standard limit of reporting (LOR).
- Data management of all OMP field and laboratory data in the Defence ESdat database.
- Preparation of results letters for off-Base stakeholders.
- Preparation of this Sampling Event Factual Report.

Table 1 Groundwater Sampling Locations

Location		Monitoring Wells
Source Areas	Former Topside Aviation Fire Training Area (FTA) and current FTA Fire Pad (Confirmed Primary Source Area [CPSA] A)	MW002, MW033
	B Hangar 410 and Former Landfill	MW047
	Frogs Hollow Former Fire Training School Location (CPSA B)	MW037
	Sewage Treatment Plant (CPSA D)	MW021, MW032
	Historical Containment Pond (CPSA E)	MW048
	Former Fire Training Area and Operational Testing Area (CPSA G)	MW050
	Former Fire Training Area and Operational Testing Area (CPSA J)	MW005
	Potential Former Fire Training Area and Operations Test Area (CPSA L)	MW006, MW023, MW028, MW029, MW036
	Former Fuel Farm 1 and Triple Interceptor Pit (CPSA M)	MW309
	Potential Location of Aircraft F-4E Incident (CPSA T)	MW035
	Aqueous Fire Forming Foam (AFFF) Wastewater Holding Tank (CPSA V)	MW046
	Fire Fighting Training School (CPSA W)	MW026, MW030, MW031, MW042, MW043
	Former Structural and Open Pit Fire Training Area and Former Secondary Fire Training Area (CPSA X and Y)	MW041
	Fuel underground storage tank (UST) with AFFF listing (CPSA Z)	MW020
	Triple Interceptor Pits at Engine Test Cell Facilities 1 and 2 (CPSA AA)	MW007
	Areas used for irrigation – former grassed runways (CPSA BB)	MW012
	Former Landfill (CPSA CC)	MW022
	Former Fire Training Area on Disused Runway (CPSA DD)	MW049
Off-Base Warrill Creek		*MW054S, MW054D,* MW057S, MW057I
On-Base Bremer River		MW024, MW025, MW034, MW044, MW055S, MW055D
Off-Base Bremer River		MW056S, MW056I

Note: *Italics* indicates that the well is located on private property.
Wells with S, D or I are adjacent monitoring wells that are screened in different aquifers. 'S' indicates the well is screened in the shallow aquifer, 'D' or 'I' indicates the well is screened in the deeper aquifer, either Tertiary Formation or Walloon Coal Measures. MW056I and MW057I were previously known as MW056D and MW057D. MW002 was formerly known as MW2.

Table 2 Surface Water Sampling Locations

Area	Surface Water Sampling Locations	Number of Locations
On-Base Drains	SW002, SW003, SW008, SW011, SW021, SW027, SW028, SW030, SW033, SW037, SW038, SW041, SW048, SW049, SW053, SW056, SW059, SW064, SW067, SW076, SW079, SW080	22
Warrill Creek	SW004, SW005, SW009, SW015, SW016, SW018, SW020, SW026*, SW034, SW043*, SW099, SW100	12
Bremer River	SW025*, SW036, SW039*, SW040*, SW045*, SW047, SW050, SW051, SW052, SW088, SW089, SW090, SW091, SW094, SW098*	15

Note: * denotes off-Base sampling location.

Table 3 Sediment Sampling Locations

Area	Sediment Sampling Locations	Number of Locations
On-Base Drains	SD002, SD003, SD008, SD011, SD021, SD027, SD028, SD030, SD033, SD037, SD038, SD041, SD048, SD049, SD053, SD056, SD059, SD079, SD064, SD067, SD076, SD080	22
Warrill Creek	SD004, SD005, SD009, SD015, SD016, SD018, SD020, SD026*, SD034, SD043*, SD099, SD100	12
Bremer River	SD025*, SD036, SD039*, SD040*, SD045*, SD047, SD050, SD051, SD052, SD088, SD089, SD090, SD091, SD094, SD098*	15

Note: * denotes off-Base sampling location.

3.0 Methodology

The methodology used for the April / May 2024 sampling event was completed in general accordance with the SAQP (AECOM, 2024a) and is summarised below. Deviations from the SAQP are discussed in **Section 3.6**.

3.1 Groundwater Sampling Methodology

The groundwater sampling methodology is outlined in **Table 4** below.

Table 4 Groundwater Sampling Methodology

Item	Details
Groundwater gauging	The depth to groundwater was measured in each monitoring well using an interface probe (IP) prior to the installation of HydraSleeves™, or if HydraSleeves™ were already installed, prior to retrieval of the HydraSleeve™. Where water level transducers were installed, the well was gauged prior to the removal of the water level transducer. Gauging was conducted in as short a time as possible, however, due to the number of wells and different requirements for accessing the monitoring well locations, the gauging took place over eleven days between 09 and 19 April 2024. Four wells could not be accessed in April 2024 and were gauged approximately two weeks' later on 03 May 2024. Water level transducers are installed in seven monitoring wells to continuously record groundwater levels (MW025, MW028, MW032, MW055S, MW055D, MW056S, MW056I). A barometric logger was installed in MW028. Transducers were removed from the wells and data downloaded in all seven monitoring wells. Partial data were downloaded from the datalogger in MW055D as it had stopped working. Groundwater level data are presented in **Appendix G**.
Field parameters	Temperature, electrical conductivity (EC), dissolved oxygen (DO), oxidation-reduction potential (ORP), pH and observations of water quality were recorded for all groundwater samples. Field parameters were obtained ex situ, using water remaining in the HydraSleeve™ following sampling. The probe on the water quality meter was decontaminated prior to being placed in the water sample.
Sampling methodology	Groundwater samples were collected from the monitoring wells using no-purge methodology HydraSleeves™, which were installed within the screened interval of each well (based on a review of the well construction log) for a minimum of 24 hours prior to the sampling round. Once sampling was completed, all sampling and monitoring equipment were removed from the well. Due to limited access to airside locations during the sampling event, bailers were used to collect groundwater samples from three monitoring wells, MW06, MW007 and MW023.
QA / QC samples	Field quality assurance / quality control (QA / QC) samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), field blanks, rinsate samples and trip blanks. Refer to **Appendix C** for assessment of QA / QC sample data. Equipment calibration certificates are presented in **Appendix F**.
Sample analysis	All primary samples were submitted for analysis for the PFAS suite using the standard LOR. Australian Laboratory Services Environmental (ALS) Brisbane, Queensland was used as the primary laboratory. The National Measurement Institute (NMI) of Sydney, New South Wales (NSW) was used as the secondary laboratory. ALS and NMI methods for groundwater analyses are certified by the National Association of Testing Authorities (NATA). Chain of custody (COC) forms are presented in **Appendix D**, laboratory analytical certificates are presented in **Appendix E**.

3.2 Surface Water Sampling Methodology

The methodology used for the April / May 2024 sampling event was completed in general accordance with the SAQP (AECOM, 2024a) and is summarised in **Table 5** below.

Table 5 Surface Water Sampling Methodology

Item	Details
Field parameters	Temperature, EC, DO, ORP, pH and observations of water quality were recorded for all surface water samples.
Sample collection methodology	Samples were collected from immediately below the water surface to minimise collection of sediment or floating materials in the samples. At each location, a new, laboratory supplied container was lowered into the water with the cap immediately applied once the container was full.
QA / QC Samples	Field QA / QC samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), field blanks, rinsate samples and trip blanks. Refer to **Appendix C** for assessment of QA / QC sample data. Equipment calibration certificates are presented in **Appendix F**.
Sample analysis	All primary samples were submitted for PFAS suite using the standard LOR. ALS Brisbane, Queensland was used as the primary laboratory. NMI of Sydney, NSW was used as the secondary laboratory. ALS and NMI methods for surface water analyses were certified by the NATA. COC forms are presented in **Appendix D**, laboratory analytical certificates are presented in **Appendix E**.

3.3 Sediment Sampling Methodology

The methodology used for the April / May 2024 sampling event was completed in general accordance with the SAQP (AECOM, 2024a) and is summarised in **Table 6** below.

Table 6 Sediment Sampling Methodology

Item	Details
Sample collection methodology	Samples representative of potentially deposited sediments were collected from within the water body where possible. Sediment samples were collected either by hand using new nitrile gloves or from the scoop on the sampling pole. A new laboratory-supplied container was filled at each location.
Logging	Sediment characterisation details were recorded for each sample.
QA / QC samples	Field QA / QC samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), field blanks, rinsate samples and trip blanks. Refer to **Appendix C** for assessment of QA / QC sample data. Equipment calibration certificates are presented in **Appendix F**.
Sample analysis	All primary samples were submitted for PFAS suite using the standard LOR. ALS Brisbane, Queensland was used as the primary laboratory. NMI of Sydney, NSW was used as the secondary laboratory. ALS and NMI methods for sediment analyses were certified by the NATA. COC forms are presented in **Appendix D**, laboratory analytical certificates are presented in **Appendix E**.

3.4 Adopted Screening Criteria

Adopted screening criteria references national guidance in the form of the PFAS NEMP, Defence estate and environmental strategies, and Defence PFAS-specific strategies and guidance. Guidance documents used to assess the dataset includes the following:

- PFAS NEMP, V2.0 (HEPA, 2020);
- Department of Health, 2019. *Health Based Guidance Values for PFAS for use in site investigations in Australia,* September 2019;
- National Health and Medical Research Council, 2019. *Guidance on PFAS in Recreational Water*, August 2019 (NHMRC, 2019);
- *National Environment Protection (Assessment of Site Contamination) Measure 1999, Schedule B1, as amended in 2013* (ASC NEPM, 2013).

In accordance with the OMP (Defence, 2020) and SAQP (AECOM, 2024a), the adopted PFAS screening criteria to assess the data generated as part of the OMP are presented in **Table 7** below.

Table 7 Summary of Adopted Screening Criteria

Pathway	Compound	Criteria	Comment / Reference
Human Health Receptors			
Drinking water – groundwater	PFHxS+ PFOS	0.07 µg/L	The values are from the PFAS NEMP (HEPA, 2020). *All groundwater results will be compared to these criteria.*
	PFOA	0.56 µg/L	
Recreational use – surface water	PFHxS+ PFOS	2 µg/L	The values presented are from the PFAS NEMP (HEPA, 2020), which are sourced from NHMRC (2019). *All surface water results will be compared to these criteria.*
	PFOA	10 µg/L	
Ecological Receptors			
Freshwater (95% species protection values)	PFOS	0.13 µg/L	The values are from the PFAS NEMP (HEPA, 2020). *All surface water and groundwater results will be compared to these criteria.*
	PFOA	220 µg/L	
Freshwater (99% species protection values)	PFOS	0.00023 µg/L	
	PFOA	19 µg/L	

There are no current HEPA (2020) endorsed human health or ecological guideline values available for PFAS in sediment.

3.5 Data Quality Objectives and Data Validation

The data quality objectives and data quality indicators adopted for these works are presented in the SAQP (AECOM, 2024a).

Data validation assessment is provided in **Appendix C**. 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.

All data collected during this event has been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual (Defence, 2018) Annex L Guidance on Data Management (amended 2021) requirements.

3.6 Deviations from the SAQP

Table 8 lists the deviations from the SAQP (AECOM, 2024a) during this sampling event. The deviations are considered to be of low significance and have a minimal impact on the sampling event results.

Table 8 Deviations from the SAQP during Sampling Event for April / May 2024

SAQP	April / May 2024 Sampling Event	Impact on OMP Program
Collection of groundwater samples at 40 locations	• MW049 was not sampled as it could not be found due to the presence of dense vegetation. • MW021 was flooded with surface water during the sampling visits and could not be accessed.	• The non-sampling of MW049 reduces the spatial coverage of the groundwater monitoring network to the south of the Base • The non-sampling of MW021 reduces the understanding of PFAS in groundwater near a major source area (Sewage Treatment Plant).
Collection of surface water samples at 49 locations	• Four surface water samples along drains were not collected at SW033, SW038, SW048 and SW067 as these locations were dry during the sampling visits.	• The non-sampling of these drains means there are no data available to evaluate PFAS concentrations at these locations. The non-presence of water means there were no PFAS migrating in surface water at the time of the visit.
Collection of sediment samples at 49 locations	• One drain location, SD048 did not have sediment present.	• No PFAS data are available for sediment sampling location SD048. The non-presence of sediment means there were no PFAS migrating in sediment at the time of the visit.
Groundwater methodology	• Due to limited time available to access airside locations, three monitoring wells, MW006, MW007 and MW023, were sampled by bailing.	• As PFAS results for groundwater samples from these wells were reported within the historical range for each well, the use of bailing has not impacted the OMP program.
Collection of samples during a single sampling event	• Off-Base sampling locations MW057S and MW057I were not accessible during the main event as a landowner had erected a fence across the Council easement where the monitoring wells are located. Sampling of these wells did not take place until two weeks later following the main event. • Sample location MW041 was not found during the initial event and MW025 was not accessible due to surface water flooding of the access road. These were sampled two weeks later following the main event.	• The delay of two weeks in completing sampling is considered to be a relatively short period and is unlikely to impact the OMP program.

SAQP	April / May 2024 Sampling Event	Impact on OMP Program
Laboratory analysis of groundwater samples	• Analysis of the groundwater sample from MW026 could not be completed as the laboratory reported that water had leaked out of both bottles. The reason for the leak is not known.	• The non-analysis of the sample from MW026 reduces the information available on the spatial coverage of PFAS in groundwater in the central portion of the Base. Concentrations in MW026 are typically close to or below the LOR.
Download of data from seven data loggers	• The datalogger in MW055D was not working. Partial data up to November 2023 was retrieved.	• Groundwater level data from MW055D screened in the Walloon Coal Measures for the period December 2023 to April 2024 was not available. This reduces the understanding of groundwater level changes during this period adjacent to Bremer River in the eastern portion of the Base.

4.0 Field Observations and Results

The April / May 2024 sampling event was completed between 09 April and 03 May 2024. The results are summarised in following sections.

4.1 Groundwater

4.1.1 Groundwater Observations and Field Measurements

Table 9 Groundwater Observations and Field Measurements

Item	Details
Access	All monitoring wells were accessible except for MW021 and MW049. MW021 was flooded with surface water. MW049 was not found due to heavy vegetation.
Monitoring well network	No issues were identified at 34 monitoring wells. The gatic covers at four locations require maintenance; MW042 (gatic missing), MW046 (bolts missing), MW047 (gatic missing) and MW050 (gatic broken).
Field observations	Groundwater from 11 monitoring wells had a sulfuric odour (MW005, MW012, MW309, MW037, MW046, MW047, MW048, MW055S, MW056S, MW057S and MW057I). Groundwater from ten monitoring wells had an organic odour (MW022, MW033, MW035, MW042, MW043, MW044, MW050, MW054S, MW054D, MW056I). No other visible or olfactory indications of contamination were observed during the sampling of the other monitoring wells. Field observations are presented in **Table T1** in **Appendix B**.
Depth to groundwater	In April / May 2024, depth to groundwater in the Alluvium was between 5.386 and 17.805 metres below top of casing (mbtoc). Depth to groundwater in the Tertiary Formation was between 5.685 and 15.786 mbtoc. Depth to groundwater in the Walloon Coal Measures was between 5.538 and 23.612 mbtoc. Groundwater elevation in the Alluvium was between 8.920 and 18.055 metres Australian height datum (mAHD). Groundwater elevation in the Tertiary Formation was between 8.681 and 28.997 mAHD. Groundwater elevation in the Walloon Coal Measures was between 13.747 and 36.821 mAHD. Groundwater gauging data are presented in **Table T1** in **Appendix B**. Water level transducer results for seven monitoring wells are presented in **Appendix G**.
Groundwater flow direction	Inferred groundwater contours and groundwater flow directions at the Base in April 2024 for the Alluvium / Tertiary Formation are shown on **Figure 4** in **Appendix A**. The inferred local groundwater flow direction is towards the northeast, east and southeast in the direction of Bremer River and Warrill Creek. The inferred flow direction is consistent with previous sampling events (AECOM, 2024b). Inferred groundwater contours and groundwater flow directions at the Base in April 2024 for the Walloon Coal Measures are shown on **Figure 5** in **Appendix A**. The inferred local groundwater flow direction is towards the northeast and east in the direction of Bremer River. The inferred flow direction is consistent with previous sampling events (AECOM, 2024b).

<table>
<tr><th>Item</th><th>Details</th></tr>
<tr><td>Groundwater quality parameter field measurements</td><td>Groundwater quality parameters were measured ex situ, using water remaining in the HydraSleeve™ following sampling. The readings are presented in Table T1 in Appendix B and are summarised per geological unit in the table below:
<table>
<tr><th>Unit</th><th>Parameter</th><th>Min.</th><th>Max.</th><th>Comment</th></tr>
<tr><td rowspan="5">Alluvium</td><td>DO (mg/L)</td><td>0.59</td><td>3.41</td><td>Poorly to mildly oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>324</td><td>7289</td><td>Fresh to brackish</td></tr>
<tr><td>pH</td><td>6.30</td><td>7.94</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>63.1</td><td>208</td><td>Moderately to strongly reducing</td></tr>
<tr><td>Temperature (°C)</td><td>21.0</td><td>25.3</td><td>-</td></tr>
<tr><td rowspan="5">Tertiary Formation</td><td>DO (mg/L)</td><td>0.36</td><td>3.54</td><td>Poorly to moderately oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>327</td><td>24303</td><td>Fresh to saline</td></tr>
<tr><td>pH</td><td>6.43</td><td>7.21</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>-3.1</td><td>278</td><td>Moderately to strongly reducing</td></tr>
<tr><td>Temperature (°C)</td><td>21.4</td><td>28.3</td><td>-</td></tr>
<tr><td rowspan="5">Walloon Coal Measures</td><td>DO (mg/L)</td><td>0.55</td><td>3.5</td><td>Poorly to moderately oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>65</td><td>21242</td><td>Fresh to saline</td></tr>
<tr><td>pH</td><td>6.42</td><td>7.21</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>72.9</td><td>295</td><td>Mildly to strongly reducing</td></tr>
<tr><td>Temperature (°C)</td><td>21.7</td><td>25.4</td><td>-</td></tr>
</table>
The measured parameter ranges are consistent with previous sampling event results (AECOM 2024b).</td></tr>
<tr><td>Weather conditions</td><td>Weather conditions during groundwater sampling were dry and sunny with maximum daily temperatures between 27.6 and 29.6°C. A total of 26.8 mm of rainfall was recorded during the sampling period between 9 and 19 April 2024 [Bureau of Meteorology (BoM) station 040004 – ‘Amberley’]. Weather conditions on 3 May 2024 were dry and sunny with no rainfall recorded.</td></tr>
<tr><td>Estate management works or training activities</td><td>Since April 2023, remediation works relating to one of the main source areas, the sewage treatment plant, has been ongoing. The remediation works involved excavation of soil and stockpiling within an area adjacent to the southern portion of the Base, near MW032 and Warrill Creek.</td></tr>
</table>

4.1.2 Groundwater Analytical Results

The groundwater analytical results for PFAS from the sampling event are presented in **Table T2** in **Appendix B**.

Concentrations of sum of PFHxS+PFOS in 24 of the 37 groundwater samples exceeded the NEMP (HEPA, 2020) drinking water guideline value with seven groundwater samples exceeding the NEMP (HEPA, 2020) PFOA drinking water guideline value[2].

PFOS were detected above the LOR in 25 of the 37 groundwater samples collected and all these samples exceeded the NEMP (HEPA, 2020) ecological guideline value for PFOS for 99% protection of ecosystems with 20 of these samples also exceeding the 95% protection guideline value. None of the groundwater samples exceeded the NEMP (HEPA, 2020) PFOA ecological guideline values for 99% and 95% protection of freshwater species.

First-time detections and exceedances from the historical dataset are recorded in **Table 10**.

[2] The number of exceedances identified only includes the primary samples. Quality assurance samples have not been included.

Table 10 First-time detections or exceedances of sum of PFHxS+PFOS or PFOA in groundwater

First time detection / exceedance	Ground-water Sampling location	Sum of PFHxS+PFOS concentration (µg/L)		PFOA concentration (µg/L)	
		April/May 2024	Historical maximum	April/May 2024	Historical maximum
First time detections of PFHxS+PFOS or PFOA in groundwater	MW041	0.49	0.44	0.01	<0.01
First time exceedances of PFHxS+PFOS or PFOA in groundwater	MW036	0.08	0.06	<0.01	<0.01

Note: Blue shading indicates a sample with a first-time detection of PFHxS+PFOS or PFOA
Yellow shading indicates a sample with a first-time exceedance above human health drinking water guideline values (refer to **Table 7**).

The first-time detection of PFOA in the samples from MW041 was equal to the laboratory limit (0.01 µg/L). PFAS is known to be present in groundwater at this location with PFHxS+PFOS detected at 0.49 µg/L in April 2024.

The first-time exceedance of sum of PFHxS+PFOS in the sample from MW036 marginally exceeded the human health drinking water guideline value (0.08 µg/L). Sum of PFHxS+PFOS in this monitoring well has been historically detected in the range 0.02 to 0.06 µg/L.

There were six new maximum sum of PFHxS+PFOS concentrations recorded during the sampling event in groundwater samples from MW025 (2.46 µg/L), MW030 (13.7 µg/L), MW036 (0.08 µg/L), MW041 (0.49 µg/L), MW055D (0.06 µg/L) and MW055S (2.72 µg/L). There were four new maximum PFOS concentrations recorded in the samples from MW025 (1.39 µg/L), MW041 (0.33 µg/L), MW055D (0.03 µg/L), MW055S (1.12 µg/L). There was one new maximum PFOA concentrations recorded in the samples from MW041 (0.01 µg/L).

4.2 Surface Water

4.2.1 Surface Water Observations and Field Measurements

Table 11 Surface Water Observations and Field Measurements

Item	Details
Access	All surface water sampling locations were accessed during the sampling event. Four locations were dry (SW033, SW038, MW48 and SW067) and surface water samples could not be collected.
Field observations	A slight sheen or biosheen was observed at eight sampling locations (SW002, SW011, SW027, SW028, SW037, SW041, SW045 and SW079). Organic odours were observed at 10 locations (SW011, SW015, SW026, SW028, SW030, SW039, SW051, SW076, SW079 and SW099). A sulfuric odour was recorded at SW059, SW064 and a sewage odour was recorded at SW008. No other visual or olfactory indications of contamination were observed during the sampling of the other surface water sampling locations. Field observations are reported in **Table T3**, **Appendix B**.

<table>
<tr><th>Item</th><th>Details</th></tr>
<tr><td>Surface water quality parameter field measurements</td><td>Surface water quality parameters were measured prior to collecting surface water samples. The readings are presented in Table T3 in Appendix B and are summarised below:
<table>
<tr><th>Unit</th><th>Parameter</th><th>Min.</th><th>Max.</th><th>Comment</th></tr>
<tr><td rowspan="5">Drain</td><td>DO (mg/L)</td><td>0.56</td><td>8.01</td><td>Poorly to well oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>71.6</td><td>666</td><td>Fresh</td></tr>
<tr><td>pH</td><td>6.26</td><td>8.75</td><td>Near neutral to alkaline</td></tr>
<tr><td>ORP (mV)</td><td>155.9</td><td>305.6</td><td>Moderately reducing</td></tr>
<tr><td>Temperature (°C)</td><td>20.6</td><td>27.0</td><td>-</td></tr>
<tr><td rowspan="5">Warrill Creek</td><td>DO (mg/L)</td><td>1.21</td><td>5.44</td><td>Poorly to moderately oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>315</td><td>702</td><td>Fresh</td></tr>
<tr><td>pH</td><td>7.22</td><td>7.93</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>199</td><td>259</td><td>Moderately reducing</td></tr>
<tr><td>Temperature (°C)</td><td>21.2</td><td>26.9</td><td>-</td></tr>
<tr><td rowspan="5">Bremer River</td><td>DO (mg/L)</td><td>1.98</td><td>7.01</td><td>Poorly to well oxygenated</td></tr>
<tr><td>EC (µS/cm)</td><td>310</td><td>1521</td><td>Fresh to brackish</td></tr>
<tr><td>pH</td><td>6.51</td><td>7.23</td><td>Near neutral</td></tr>
<tr><td>ORP (mV)</td><td>174</td><td>402</td><td>Mildly to moderately reducing</td></tr>
<tr><td>Temperature (°C)</td><td>16.9</td><td>25.2</td><td>-</td></tr>
</table>
The measured parameter ranges are consistent with previous sampling event results (AECOM 2024b).</td></tr>
<tr><td>Weather Conditions</td><td>Weather conditions during groundwater sampling were dry and sunny with maximum daily temperatures between 27.6 and 29.6°C. A total of 26.8 mm of rainfall was recorded during the sampling period between 9 and 19 April 2024 [BoM station 040004 – ‘Amberley’]. Weather conditions on 3 May 2024 were dry and sunny with no rainfall recorded.</td></tr>
<tr><td>Estate Management Works or Training Activities</td><td>Since April 2023, remediation works relating to one of the main source areas, the sewage treatment plant, has been ongoing. The remediation works involved excavation of soil and stockpiling within an area adjacent to the southern portion of the Base, near MW032 and Warrill Creek.</td></tr>
</table>

4.2.2 Surface Water Analytical Results

The analytical results for PFAS in surface water from this sampling event are presented in **Table T4** in **Appendix B**. There were no first-time detections or new exceedances of sum of PFHxS+PFOS or PFOA.

Concentrations of sum of PFHxS+PFOS in 13 of the 45 surface water samples exceeded the NEMP (HEPA, 2020) recreational water guideline value with none of the samples exceeding the PFOA guideline value.

A total of 28 of 45 samples exceeded the NEMP (HEPA, 2020) ecological guideline for PFOS for 99% protection of ecosystems with 17 of these samples also exceeding the 95% protection guideline value. None of the samples exceeded the NEMP (HEPA, 2020) PFOA ecological guideline values for either 95% or 99% protection of freshwater species.

There were no new maximum concentrations of sum of PFHxS+PFOS or PFOA in the surface water samples. There was one new maximum concentration for PFOS in the sample from SW064 (1.44 µg/L).

4.3 Sediment

4.3.1 Sediment Observations and Field Measurements

Table 12 Sediment Observations

Item	Details
Access	All sediment sample locations were accessible. No sediment was present at SD048 and a sample could not be collected.
Field Observations	Sediment logging data are presented in **Table T5** in **Appendix B**. 20 of the 48 samples had an organic odour and one sample had a sulfuric odour. No visible indications of contamination were observed during sediment sampling.
Weather Conditions	Weather conditions during groundwater sampling were dry and sunny with maximum daily temperatures between 27.6 and 29.6°C. A total of 26.8 mm of rainfall was recorded during the sampling period between 9 and 19 April 2024 [BoM station 040004 – 'Amberley']. Weather conditions on 3 May 2024 were dry and sunny with no rainfall recorded.
Estate Management Works or Training Activities	Since April 2023, remediation works relating to one of the main source areas, the sewage treatment plant, has been ongoing. The remediation works involved excavation of soil and stockpiling within an area adjacent to the southern portion of the Base, near MW032 and Warrill Creek.

4.3.2 Sediment Analytical Results

The analytical results for PFAS in sediment from this sampling event are presented in **Table T6** in **Appendix B**. There were no first-time detections in the historical dataset. New maximum concentrations were recorded in SD004 with 0.0289 mg/kg sum of PFHxS+PFOS, 0.0283 mg/kg PFOS and 0.0005 mg/kg PFOA. A new maximum concentration of PFOA was also recorded in SD053 (0.0012 mg/kg).

5.0 Summary and Next Sampling Event

5.1 Summary of Sampling Event

A groundwater, surface water and sediment sampling event was completed within the RAAF Base Amberley Management Area on selected days between 09 April and 3 May 2024. The program included sampling of groundwater from 40 monitoring wells and 49 co-located surface water and sediment sampling locations. In total, 37 groundwater samples, 45 surface water samples and 48 sediment samples were analysed.

Table 13 summarises the findings of the April / May 2024 sampling event and the recommended actions.

Table 13 Summary of Sampling Event

Item	Comment	Recommended Actions
Access to sampling locations	All groundwater sampling locations were accessible except for MW049 due to the presence of heavy vegetation and MW021 which was flooded. All surface water samples were collected except for surface water samples from SW033, SW038, SW048 and SW067 as these locations were dry at the time of sampling. All sediment samples were collected except for SW048 as there was no sediment present.	The location of MW049 is heavily vegetated and the area would need to be mown to expose the monitoring well cover. Surface water sampling locations SW033, SW038, SW048 and SW067 should be reinspected during the next sampling event in October 2024.
Groundwater level loggers	Seven groundwater level loggers were retrieved and data downloaded.	Ongoing monitoring in accordance with the OMP.
Monitoring well network condition	No issues were identified in 34 of the 38 monitoring wells sampled. The gatic covers for MW042, MW046, MW047 and MW050 require maintenance.	The gatic covers for MW042, MW046, MW047 and MW050 require repair.
Analytical results	Sum of PFHxS+PFOS or PFOA concentrations in all groundwater samples were consistent with historical results. Six groundwater sampling locations reported new maximum concentrations or either sum of PFHxS+PFOS or PFOA. Sum of PFHxS+PFOS and PFOA concentrations in all 45 surface water samples collected were consistent with historical results. One surface water sampling location reported a new maximum concentration of PFOS. Sum of PFHxS+PFOS or PFOA concentrations were consistent with historical results in all 48 sediment samples. Two sediment samples reported new maximum concentrations of sum of PFHxS+PFOS, PFOS or PFOA.	Ongoing monitoring in accordance with the OMP.
First-time detections of sum	One first-time detection of PFOA equal to the laboratory LOR was recorded in the groundwater sample from MW041,	Ongoing monitoring in accordance with the OMP.

Item	Comment	Recommended Actions
of PFHxS+PFOS or PFOA	however, sum of PFHxS+PFOS has been consistently detected in groundwater from this well. There were no first-time detections in the surface water or sediment samples collected.	
New exceedance of NEMP (HEPA, 2020) guideline values	There was one new exceedance of the NEMP (HEPA, 2020) drinking water guideline value for sum of PFHxS+PFOS in the groundwater sample from MW036 (0.08 µg/L), which marginally exceeded the guideline value. Historical results in the well have been in the range 0.02-0.06 µg/L. There were no new exceedances of the guideline values for surface water samples.	Ongoing monitoring in accordance with the OMP.

5.2 Upcoming Sampling Events

The next biannual sampling event is scheduled for October 2024.

5.3 Upcoming Ongoing Monitoring Report

The next Ongoing Monitoring Report is scheduled for Q3 2024.

6.0 References

AECOM, 2024a. *PFAS OMP- RAAF Base Amberley Sampling and Analysis Quality Plan*, Final Rev 8, January 2024.

AECOM, 2024b – in draft, *Ongoing Monitoring Report, March 2021 to May 2023 – PFAS OMP – RAAF Base Amberley,* Rev 6 Draft, May 2024.

ASC NEPM, 2013a. *Schedule B2. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B2 Guideline on Site Characterisation*.

ASC NEPM, 2013b. *Schedule B4. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B4 Guideline on Site-Specific Health Risk Assessment Methodology*.

ASC NEPM, 2013c. *Schedule B7. National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) Schedule B7 Guideline on Derivation of Health-Based Investigation Levels*.

ANZG, 2018. *Australian and New Zealand Guidelines (ANZG) for Fresh and Marine Water Quality,* 2018.

CH2M Hill, 2018. *RAAF Base Amberley PFAS Investigation – Detailed Site Investigation*, Final, Rev6, November 2018.

CH2M Hill, 2019c, *RAAF Base Amberley PFAS Seasonal Monitoring Event Report*, Rev0, July 2019.

Department of Defence, 2018. *Routine Environment Water Quality Monitoring Manual*.

Department of Defence, July 2018, amended June 2021, *Defence Contamination Management Manual.*

Department of Defence, 2020. *PFAS Area Management Plan- RAAF Base Amberley, Queensland,* September 2020.

Department of Defence, 2021. *PFAS OMP Factual Report Guidance,* v0.2, May 2021.

Department of Health, 2019. *Health Based Guidance Values for PFAS for use in site investigations in Australia.* 2017, as updated in 2019.

Heads of EPAs Australia and New Zealand (HEPA) 2020. *PFAS National Environmental Management Plan*, V2.0. January 2020.

National Health and Medical Research Council (NHMRC), 2019. *Guidance on PFAS in Recreational Water.* August 2019.

United States Environmental Protection Agency, 2006. *Guidance on Systematic Planning Using the Data Quality Objectives Process*, EPA QA/G-4: EPA/240/B-06/001.

Appendix A

Figures

Appendix A Figures

Figure 1 RAAF Base Amberley Location

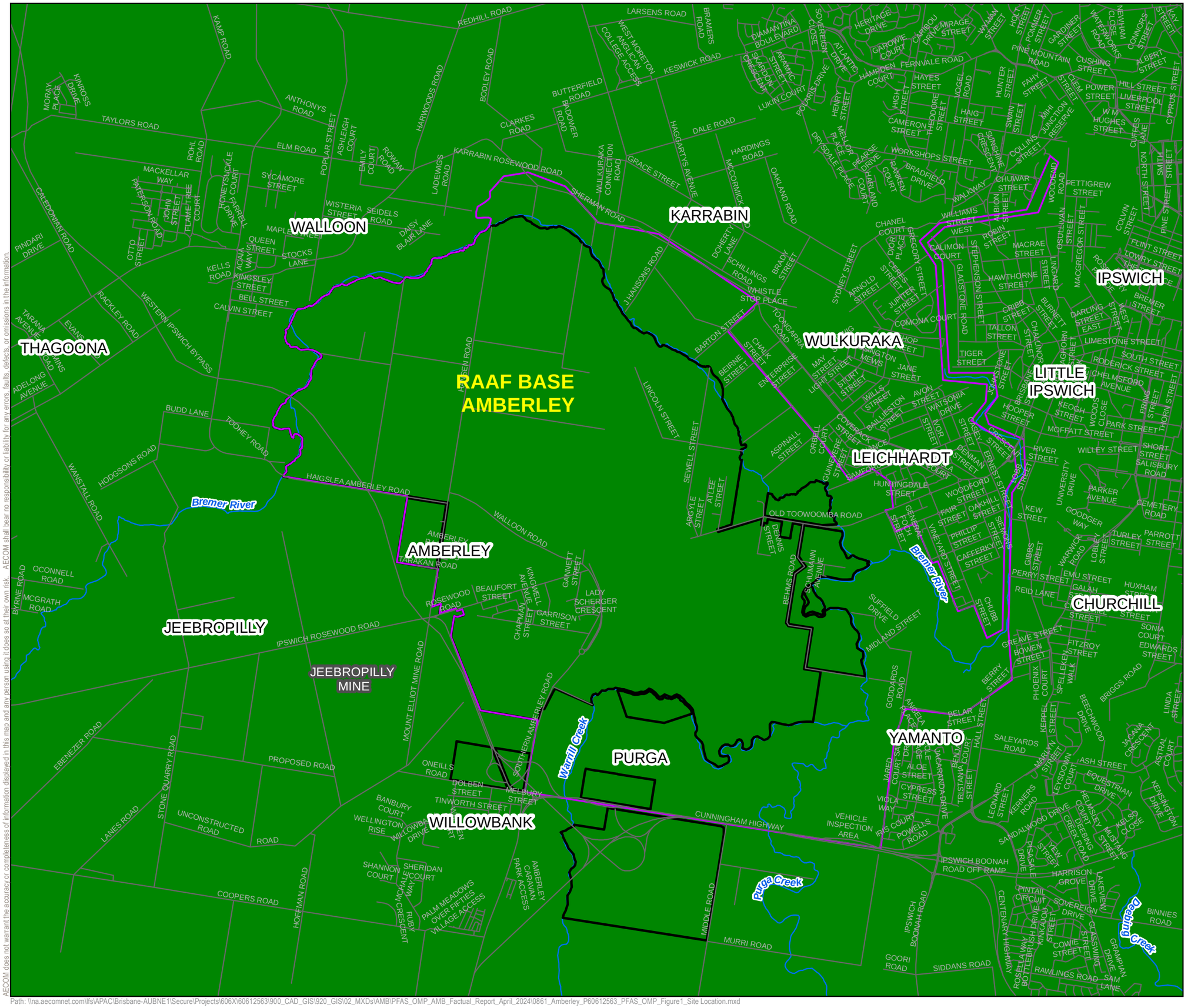
Figure 2 Groundwater Monitoring Wells

Figure 3 Surface Water and Sediment Sampling Locations

Figure 4 Inferred Groundwater Contours in the Alluvium / Tertiary Formation – April 2024

Figure 5 Inferred Groundwater Contours in the Walloon Coal Measures – April 2024

Figure 6 Groundwater Results – Deviations from Historical Data – April / May 2024



LEGEND

- Management Area
- Base Boundary
- Watercourses

0 0.5 1 km

[redacted]

SCALE	SIZE
1:38,000	A3
SHEET	COORDINATE SYSTEM
	GDA 1994 MGA Zone 56

TITLE

Figure 1: RAAF BASE AMBERLEY LOCATION

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT,
FACTUAL REPORT: APRIL / MAY 2024

CLIENT

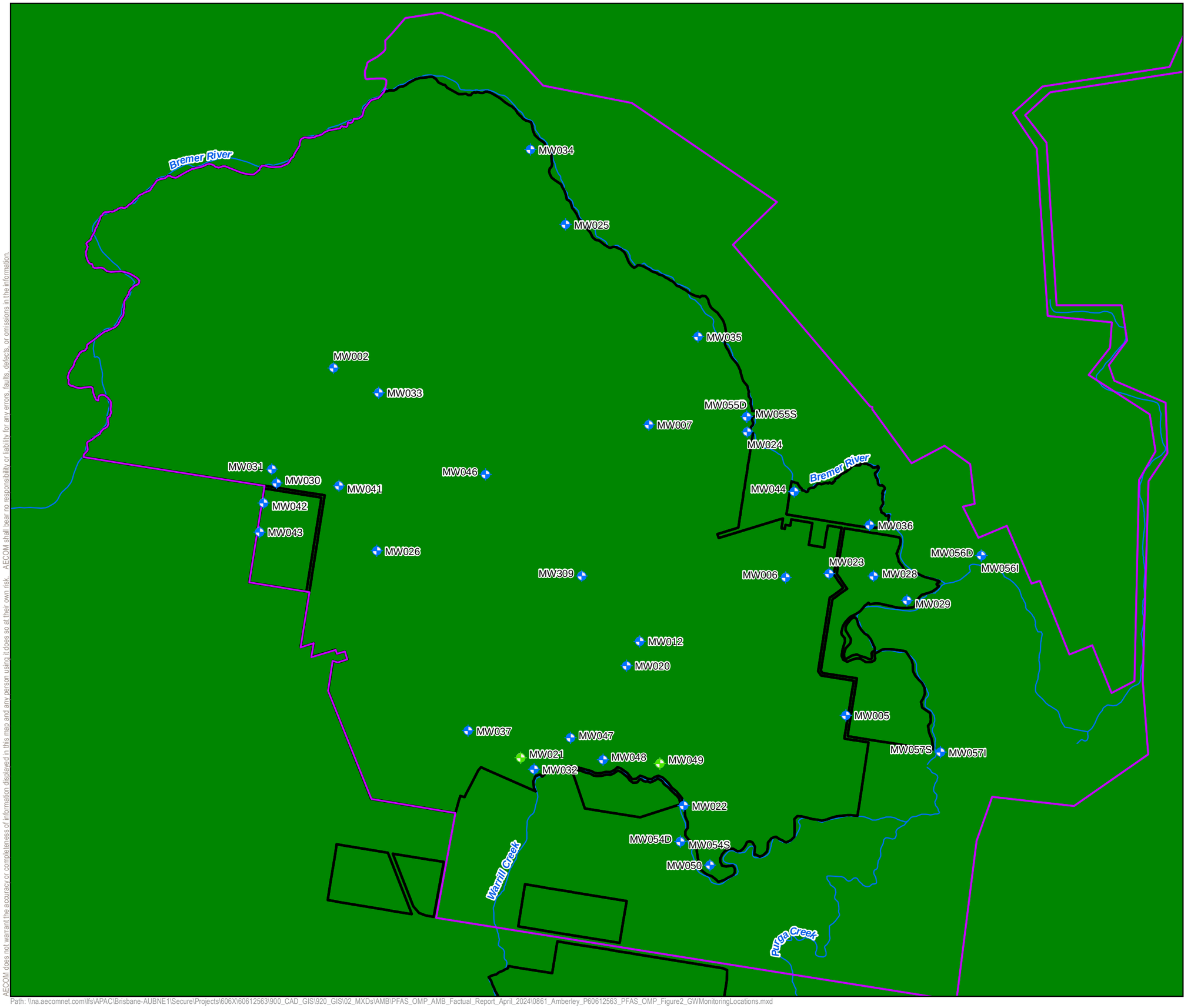
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LEGEND

- Groundwater Monitoring Well (sampled)
- Groundwater Monitoring Well (not sampled)
- Management Area
- Base Boundary
- Watercourses

N

0 0.5 1 km

SCALE 1:26,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 2: Groundwater Monitoring Wells

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY
SAMPLING EVENT,
FACTUAL REPORT: APRIL / MAY 2024

CLIENT

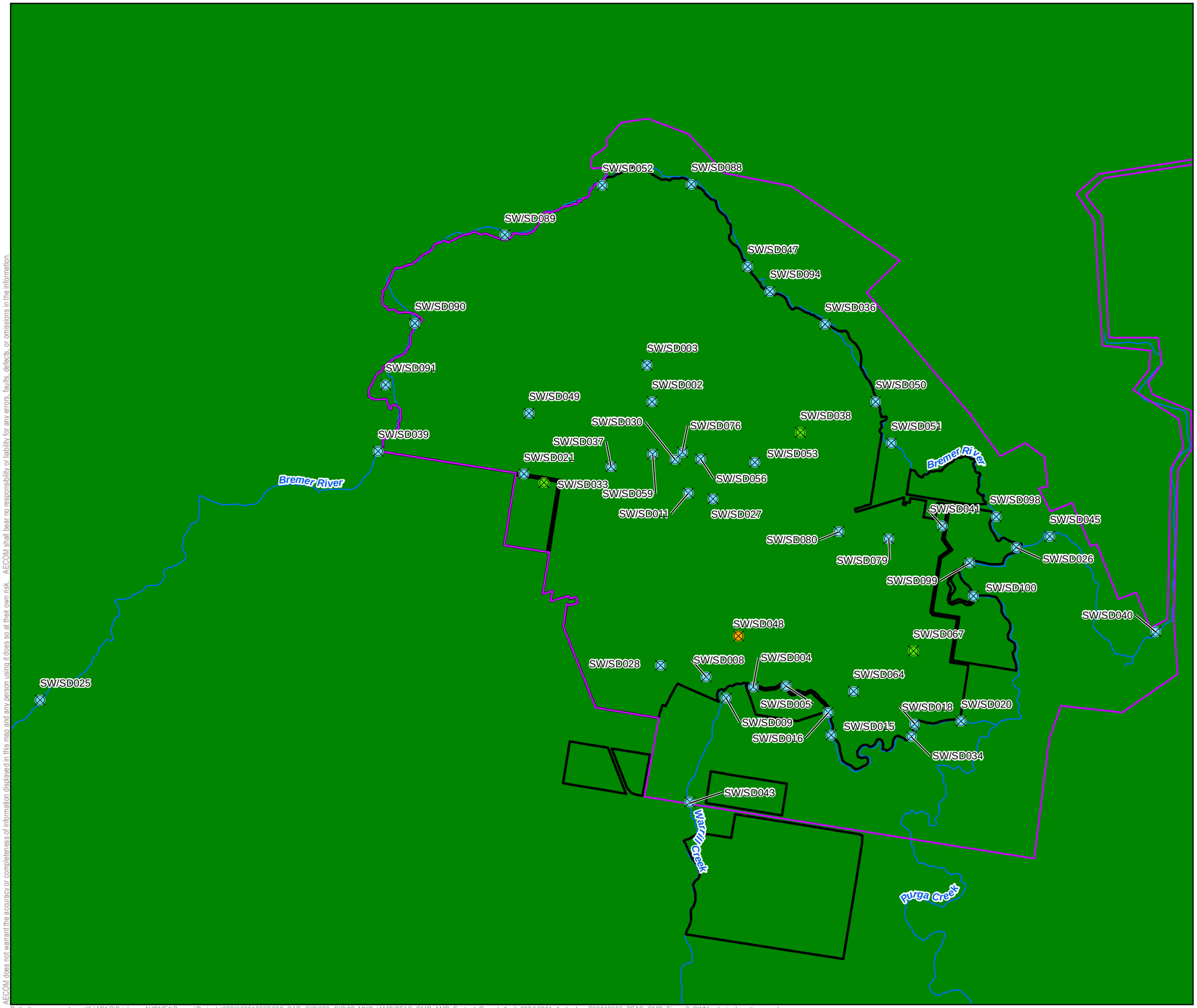
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LEGEND

- Surface water and sediment sample collected
- Sediment sampled collected, surface water sample not collected
- Surface water and sediment sample not collected
- Management Area
- Base Boundary
- Watercourses

N

0 0.5 1 km

SCALE 1:35,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 3: Surface Water and Sediment Sampling Locations

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT,
FACTUAL REPORT: APRIL / MAY 2024

CLIENT

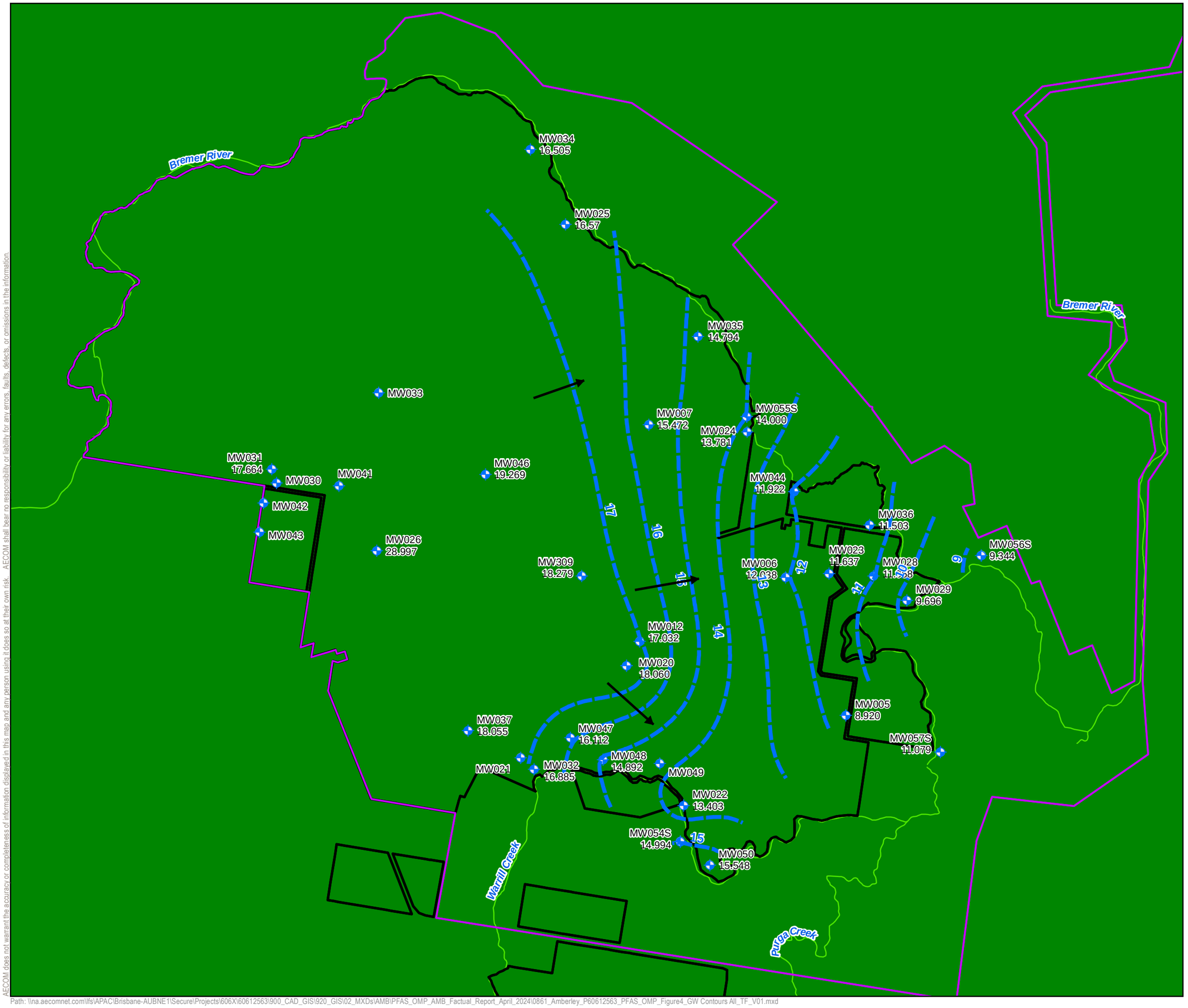
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LEGEND

- Groundwater Monitoring Wells
- Management Area
- Base Boundary
- Watercourses
- Inferred Groundwater Contour (mAHD)
- Groundwater flow direction

SCALE 1:26,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 4: Inferred Groundwater Contours in the Alluvium / Tertiary Formation - April / May 2024

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT,
FACTUAL REPORT: APRIL / MAY 2024

CLIENT

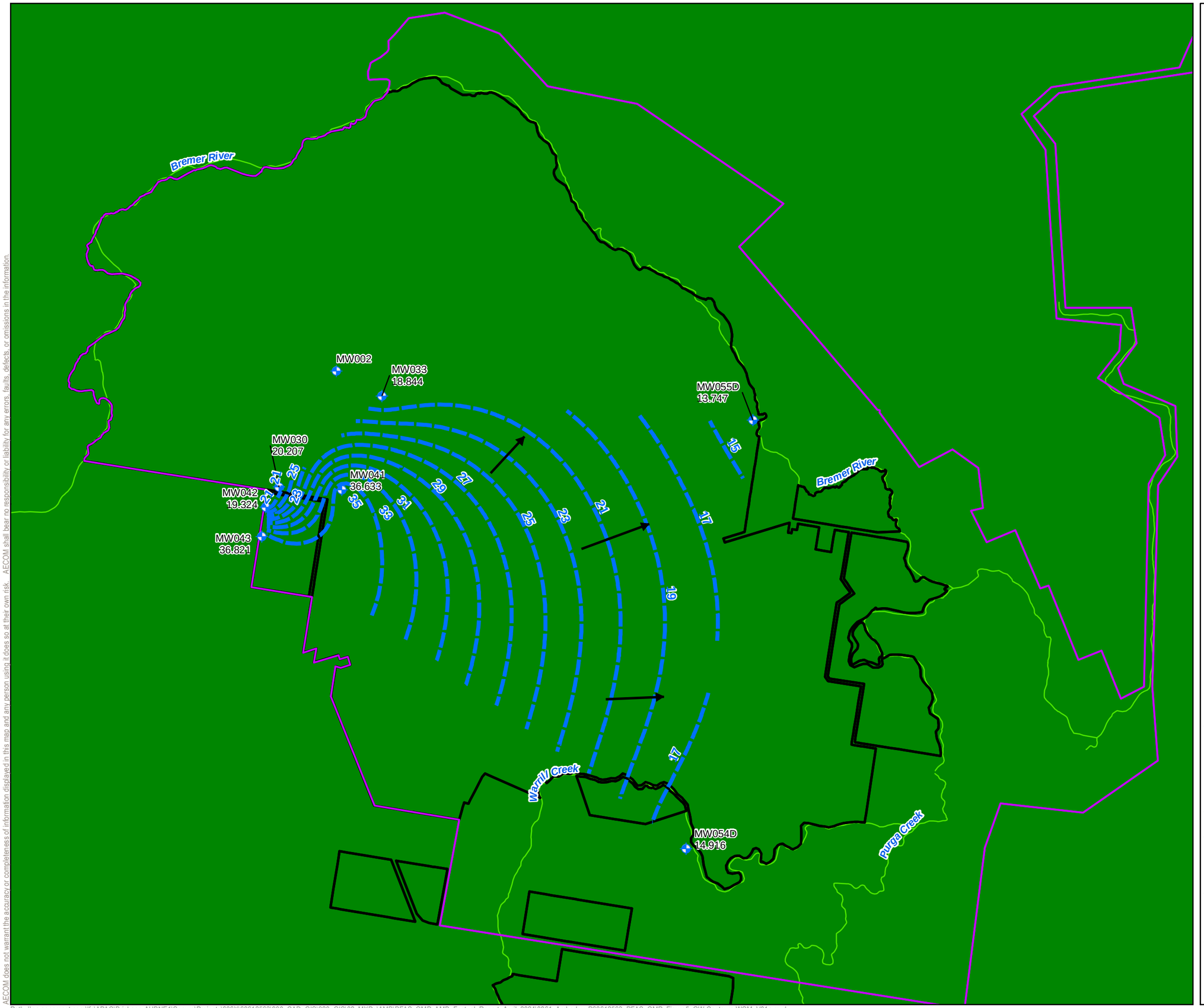
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LEGEND

- Groundwater Monitoring Well
- Management Area
- Base Boundary
- Watercourses
- Inferred Groundwater Contours (mAHD)
- Groundwater flow direction

N

0 0.5 1 km

SCALE 1:26,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 5: Inferred Groundwater Contours in the Walloon Coal Measures - April 2024

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT,
FACTUAL REPORT: APRIL / MAY 2024

CLIENT

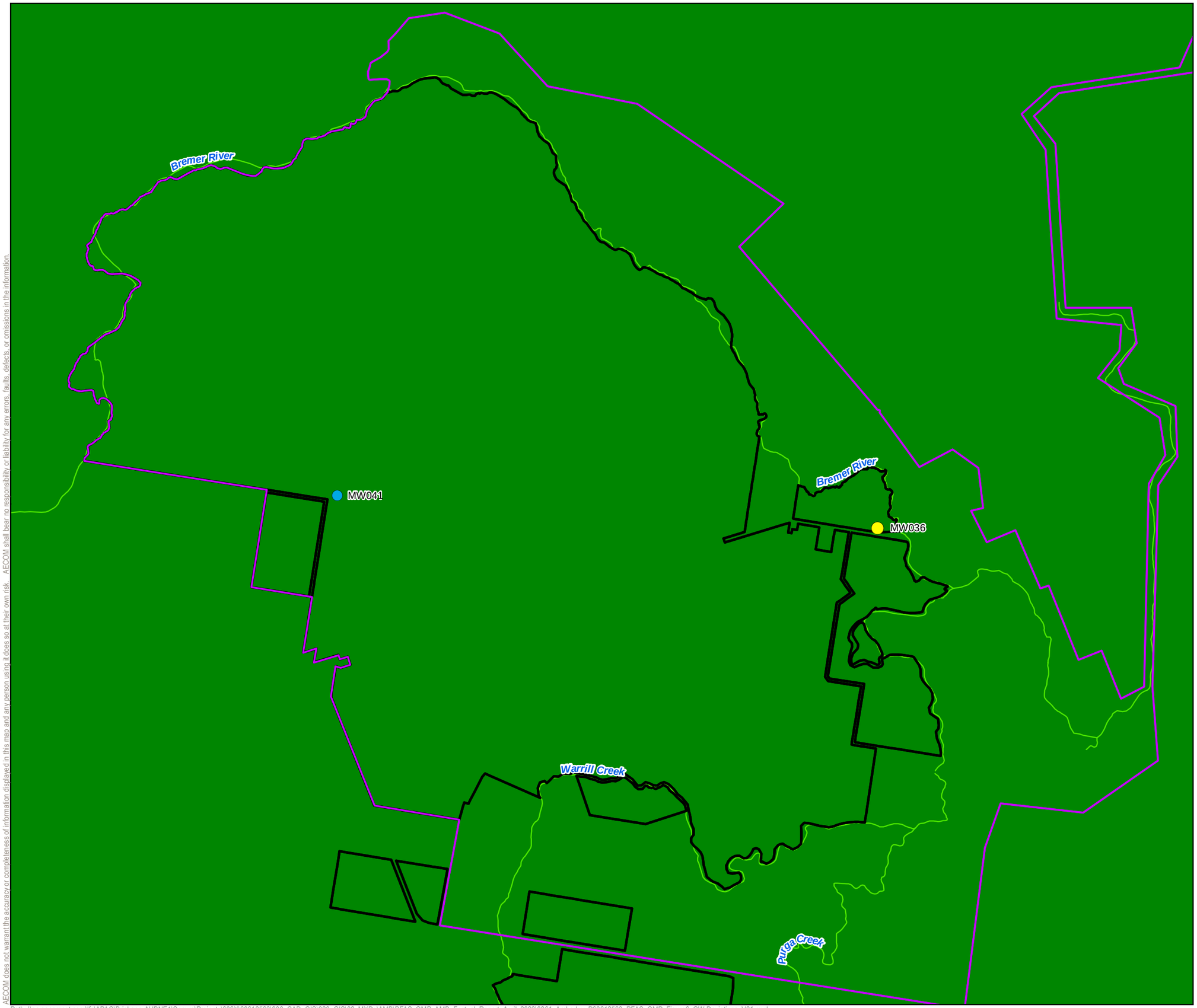
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LEGEND

- Management Area
- Base Boundary
- Watercourses
- New exceedance of PFHxS+PFOS or PFOA
- First time detection of PFHxS+PFOS or PFOA

N

0 0.5 1 km

SCALE 1:26,000

SIZE A3

SHEET

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

Figure 6: Groundwater Results – Deviations from Historical Data – April / May 2024

PROJECT

PROJECT: PFAS OMP RAAF BASE AMBERLEY SAMPLING EVENT FACTUAL REPORT: APRIL / MAY 2024

CLIENT

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Appendix B

Tables

Appendix B Tables

Table T1 Groundwater Gauging and Field Parameter Results

Table T2 Groundwater PFAS Analytical Results

Table T3 Surface Water Field Parameter Results

Table T4 Surface Water PFAS Analytical Results

Table T5 Sediment Sampling Observations

Table T6 Sediment PFAS Analytical Results

Property ID	Well ID	Screen depth (m)	Hydrasleeve™ Install Date	Approximate Hydrasleeve™ Installation Depth (mbtoc)	Hydrasleeve™ Sample Date / Gauging Date	Hydrasleeve™ Redeployed Post-Sampling?	Aquifer	Well Depth (mbtoc)	Depth to Water (mbtoc)	TOC Elevation (mAHD)	Groundwater Elevation (mAHD)	Condition of Well	DO (mg/L)	EC (µS/cm)	pH	Er (mV)	Eh (mV)	Temp (°C)	Water Colour	Odour	Sheen	Sample Method / Comments
0861	MW002	16.7-23.7	23/10/2023	22.50	19/04/2024	No	Walloon Coal Measures	24.15	17.208	Unknown	Unknown	Good	0.99	13032	6.42	-22.8	182.2	24.1	Brown, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW005	13.0-17.0	27/03/2024	16.00	15/04/2024	No	Alluvium	15.178	17.805	26.725	8.92	Good	0.59	2216	6.66	-141.9	63.1	25	Clear to milky, high turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW006	10.3-14.3	-	-	18/04/2024	No	Alluvium	13.291	9.899	21.937	12.038	Good	2.74	1291	7.94	-63.2	141.8	22.1	Light brown to clear, high turbidity	No odour	No sheen	Bailer
0861	MW007	6.0-10.0	-	-	18/04/2024	No	Alluvium	10.752	7.736	23.208	15.472	Good	2.45	4237	7.09	-27.2	177.8	23.2	Brown, high turbidity	No odour	No sheen	Bailer
0861	MW012	12.5-17.5	27/03/2024	15.00	15/04/2024	No	Tertiary Formation	16.098	9.143	26.175	17.032	Good	0.37	12527	6.63	-208.1	-3.1	27.1	Cloudy, high turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW020	23.5-16.5	27/03/2024	15.00	15/04/2024	No	Tertiary Formation	15.333	8.983	27.043	18.06	Good	1.05	5368	6.81	62.8	267.8	28.3	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW021	2.5-6.0	27/03/2024	4.50	-	-	Alluvium	-	-	20.72	-	Good	-	-	-	-	-	-	-	-	-	Flooded
0861	MW022	4.0-9.0	27/03/2024	8.00	19/04/2024	No	Alluvium	9.79	6.247	19.65	13.403	Good	2.03	723	6.3	-63.8	141.2	24.4	Brown, moderate turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW023	7.8-11.8	-	-	18/04/2024	No	Alluvium	12.861	8.873	20.51	11.637	Good	2.6	5581	6.85	-32.5	172.5	22.7	Brown, moderate turbidity	No odour	No sheen	Bailer
0861	MW024	7.0-11.0	27/03/2024	10.50	16/04/2024	No	Alluvium	11.91	7.169	20.95	13.781	Good	1.45	3217	7.09	-82.9	122.1	22.3	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW025	7.4-11.4	27/03/2024	8.00	3/05/2024	No	Alluvium	12.215	8.85	25.42	16.57	Good	3.41	1090	7.27	2.5	207.5	22.3	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW026	14.5-17.5	27/03/2024	16.00	15/04/2024	No	Tertiary Formation	17.344	11.243	40.24	28.997	Good	1.79	24303	6.43	73.4	278.4	25.9	Brown, moderate turbidity	No odour	No sheen	HydraSleeve™
0861	MW028	10.5-14.5	27/03/2024	12.50	18/04/2024	No	Alluvium	13.93	9.772	20.83	11.058	Good	0.77	6254	6.97	-88.4	116.6	23.7	Cloudy, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW029	7.0-10.0	27/03/2024	9.00	18/04/2024	No	Alluvium	10.874	8.534	18.23	9.696	Good	1.41	4994	6.86	-37.5	167.5	25.3	Brown, moderate turbidity	No odour	No sheen	HydraSleeve™
0861	MW030	17.0-21.0	27/03/2024	19.00	19/04/2024	No	Walloon Coal Measures	21.803	15.633	35.84	20.207	Good	3.5	21242	6.86	-32.3	172.7	21.9	Clear, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW309	13.0-19.0	27/10/2023	18.00	15/04/2024	No	Tertiary Formation	19.295	10.328	28.607	18.279	Good	3.54	2341	7.16	-79.6	125.4	25.9	Cloudy, moderate turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW031	14.5-20.5	27/03/2024	17.00	19/04/2024	No	Tertiary Formation	18.102	15.786	33.45	17.664	Good	2.02	14154	6.59	-47.1	157.9	21.4	Light brown, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW032	8.0-14.0	27/03/2024	13.00	15/04/2024	No	Alluvium	14.64	9.395	26.28	16.885	Good	1.23	2950	6.89	-44.5	160.5	23.1	Light brown, low turbidity	No odour	No sheen	HydraSleeve™
0861	MW033	29.0-33.0	27/03/2024	32.00	17/04/2024	No	Walloon Coal Measures	34.286	23.612	42.456	18.844	Good	0.68	15671	6.59	-125.8	79.2	22.1	Light grey, moderate turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW034	5.0-10.0	27/03/2024	8.00	19/04/2024	No	Alluvium	11.5	7.8	24.305	16.505	Good	2.23	1543	7.23	-42	163	22.9	Brown, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW035	8.0-13.5	27/03/2024	12.50	16/04/2024	No	Alluvium	14.501	10.205	24.999	14.794	Good	1.06	2884	6.53	-89.9	115.1	23.9	Clear, low turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW036	10.2-15.2	27/03/2024	14.00	18/04/2024	No	Alluvium	14.784	12.537	24.04	11.503	Good	1.81	2005	7.06	-32	173	23.1	Brown, non-turbid	No odour	No sheen	HydraSleeve™
0861	MW037	5.0-10.0	27/03/2024	9.00	16/04/2024	No	Alluvium	10.959	7.164	25.219	18.055	Good	1.31	7289	6.7	-73.8	131.2	21.0	Clear, non-turbid	Sulfuric odour	No sheen	HydraSleeve™
0861	MW041	11.5-14.5	27/03/2024	13.00	3/05/2024	No	Walloon Coal Measures	14.37	9.75	46.383	36.633	Good	0.73	11636	6.5	90	295	22.2	Brown, high turbidity	No odour	No sheen	HydraSleeve™
0861	MW042	24.0-30.0	30/10/2023	28.00	19/04/2024	No	Walloon Coal Measures	29.001	20.712	40.036	19.324	Damaged (gatic missing)	0.57	15886	6.89	-88.7	116.3	25.2	Black, high turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW043	18.0-21.0	30/10/2023	19.50	19/04/2024	No	Walloon Coal Measures	20.625	12.361	49.182	36.821	Good	0.57	7939	6.76	-74.3	130.7	25.4	Brown, high turbid	Organic odour	No sheen	HydraSleeve™
0861	MW044	8.0-11.0	24/10/2023	9.00	18/04/2024	No	Alluvium	11.138	8.389	20.311	11.922	Good	0.79	736	6.83	-103.7	101.3	23.7	Brown, moderate turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW046	8.2-11.2	27/10/2023	10.00	15/04/2024	No	Tertiary Formation	11.035	6.732	26.001	19.269	Damaged (bolts)	0.87	617	7.16	-134.4	70.6	26.9	Light grey, high turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW047	10.5-13.5	26/10/2023	12.00	15/04/2024	No	Tertiary Formation	13.201	10.153	26.265	16.112	Damaged (gatic missing)	0.4	1878	6.81	-154.2	50.8	24.8	Clear, high turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW048	7.5-10.5	26/10/2023	9.50	19/04/2024	No	Alluvium	10.235	8.216	23.108	14.892	Good	1.2	323.7	6.52	-57.9	147.1	23.3	Grey, high turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW049	7.5-10.5	-	-	-	-	-	-	-	-	-	-										Not found
0861	MW050	11.5-14.5	27/10/2023	13.30	19/04/2024	No	Alluvium	14.421	8.769	24.317	15.548	Damaged (gatic broken)	0.76	595	6.98	-67.1	137.9	24.1	Brown, high turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW054D	18.0-21.0	26/10/2023	20.00	15/04/2024	No	Walloon Coal Measures	20.951	5.538	20.454	14.916	Good	0.55	272	6.82	-132.1	72.9	23	Grey, high turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW054S	4.0-7.0	26/10/2023	6.00	16/04/2024	No	Alluvium	6.89	5.386	20.38	14.994	Good	1.96	3414	6.72	-129.2	75.8	23.2	Black, high turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW055D	28.0-34.0	24/10/2023	32.50	16/04/2024	No	Walloon Coal Measures	33.829	8.449	22.196	13.747	Good	1.05	65	7.21	-97.1	107.9	21.7	Black, moderate turbidity	No odour	No sheen	HydraSleeve™
0861	MW055S	9.0-12.0	24/10/2023	10.00	16/04/2024	No	Alluvium	11.582	8.139	22.14	14.001	Good	1.69	3659	6.71	-89.9	115.1	22.2	Black, high turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW056S	6.5-9.5	26/10/2023	8.50	16/04/2024	No	Alluvium	9.444	5.734	15.078	9.344	Good	1.14	5506	6.63	-117	88	21.3	Black, high turbidity	Sulfuric odour	No sheen	HydraSleeveTM
0861	MW056I	15.0-18.0	26/10/2023	17	16/04/2024	No	Tertiary Formation	17.741	6.081	14.762	8.681	Good	0.36	327	7.21	38.8	243.8	21.6	Brown, moderate turbidity	Organic odour	No sheen	HydraSleeve™
0861	MW057I	12.5-15.5	29/11/2023	14.50	3/05/2024	No	Tertiary Formation	15.5	5.685	16.494	10.809	Good	1.01	394.1	6.68	-15.8	189.2	21.6	Yellow, low-moderate turbidity	Sulfuric odour	No sheen	HydraSleeve™
0861	MW057S	5.5-8.5	29/11/2023	7.00	3/05/2024	No	Alluvium	8.41	5.4	16.479	11.079	Good	1.06	942	6.56	-8	197	21.5	Yellow, low-moderate turbidity	Sulfuric odour	No sheen	HydraSleeve™

Notes

All Hydrasleeves™ were installed a minimum of 24 hours prior to sampling.

m - metres
mbtoc - metres below top of casing
mAHD - metres above Australian Height Datum
TOC - Top of Casing
DO - Dissolved Oxygen
EC - Electrical Conductivity
Er - Uncorrected Oxidation Reduction Potential
Eh - Corrected Oxidation Reduction Potential
` - no data
Er converted to Eh by adding 205 based on a YSI with Ag/AgCl sensor calibrated to a 3.5 molar KCL solution
mg/L - milligrams per litre
µS/cm - microsiemens per centimetre
mV - millivolts
°C - degrees Celsius

			Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids											Perfluoroalkyl Sulfonamides							Fluorotelomer Sulfonic Acids				
		Sum of PFHxS and PFOS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	EQL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.05	0.05	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PFAS NEMP 2020 Drinking Water		**0.07**											**0.56**																	
PFAS NEMP 2020 Freshwater 95%							*0.13*						*220*																	
PFAS NEMP 2020 Freshwater 99%							***0.00023***						***19***																	
Field ID	**Location Cod**	**Date**	**Sample Code**	**Sample Type**																											
0861_MW002_240419	MW002	19 Apr 2024	EB2413910001	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.02
0861_MW005_240415	MW005	15 Apr 2024	EB2413910002	Normal	**0.08**	<0.02	<0.02	0.06	<0.02	***0.02***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08
0861_MW006_240418	MW006	18 Apr 2024	EB2413910003	Normal	**68.6**	3.2	2.96	20.2	0.71	***48.4***	<0.10	0.9	2.15	6.4	0.97	**1.51**	<0.10	<0.10	<0.10	<0.10	<0.25	0.17	<0.25	<0.25	<0.25	<0.25	<0.10	<0.10	<0.10	0.51	<0.10	<0.10	89.9
0861_MW007_240418	MW007	18 Apr 2024	EB2413910004	Normal	**33.9**	1.46	1.61	13.1	0.9	***20.8***	<0.05	0.4	0.59	2.51	0.44	**0.98**	<0.05	<0.05	<0.05	<0.05	<0.12	0.11	<0.12	<0.12	<0.12	<0.12	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	43.7
0861_MW012_240415	MW012	15 Apr 2024	EB2413910005	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW020_240415	MW020	15 Apr 2024	EB2413910006	Normal	**106**	2.61	3.38	27.5	2.02	***79***	<0.24	<1.2	3.45	7	1.9	**3.17**	0.4	<0.24	<0.24	<0.24	<0.59	<0.24	<0.59	<0.59	<0.59	<0.59	<0.24	<0.24	<0.24	0.49	<0.24	<0.24	132
0861_MW022_240419	MW022	19 Apr 2024	EB2413910007	Normal	**4.47**	0.68	0.59	3.79	0.06	***0.68***	<0.02	0.3	0.11	0.51	0.09	0.16	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	7.15
0861_MW023_240418	MW023	18 Apr 2024	EB2413910008	Normal	**0.9**	0.14	0.15	0.74	<0.02	***0.16***	<0.02	<0.1	<0.02	0.04	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.28
0861_MW024_240416	MW024	16 Apr 2024	EB2413910009	Normal	**0.08**	0.02	0.02	0.08	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.12
0861_MW025_240503	MW025	03 May 2024	EB2414902002	Normal	**2.46**	0.18	0.15	1.07	0.05	***1.39***	<0.02	0.2	0.36	0.48	0.12	0.13	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	4.19
0861_MW028_240418	MW028	18 Apr 2024	EB2413910011	Normal	**52.6**	2.81	2.96	20.5	1.77	***32.1***	<0.05	0.6	0.85	4.23	0.8	**1.44**	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.12	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	68.1
0861_MW029_240418	MW029	18 Apr 2024	EB2413910012	Normal	**9.06**	0.68	0.76	4.73	0.32	***4.33***	<0.02	0.1	0.18	0.85	0.15	0.23	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	12.3
0861_QC109_240418	MW029	18 Apr 2024	EB2413950021	Field_D	**7.76**	0.71	0.73	3.94	0.3	***3.82***	<0.02	0.1	0.16	0.82	0.12	0.18	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	10.9
0861_QC209_240418	MW029	18 Apr 2024	N24/009286	Interlab_D	**5.3**	0.62	0.55	3	0.21	***2.3***	<0.01	0.13	0.14	0.66	0.091	0.16	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	7.86
0861_MW030_240419	MW030	19 Apr 2024	EB2413910013	Normal	**13.7**	4.88	4.39	13.5	0.19	***0.23***	<0.02	1.3	1.85	10.5	1.78	**1.29**	<0.02	<0.02	<0.02	<0.02	<0.06	<0.02	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	39.9
0861_MW031_240419	MW031	19 Apr 2024	EB2413910015	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW032_240415	MW032	15 Apr 2024	EB2413910016	Normal	**35.3**	1.6	1.92	11.2	0.88	***24.1***	<0.02	0.6	0.81	3.93	1.01	**2.13**	0.06	<0.02	<0.02	<0.02	<0.06	<0.02	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	0.08	<0.05	<0.05	48.4
0861_MW033_240417	MW033	17 Apr 2024	EB2413910017	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.19	<0.05	<0.05	0.19
0861_QC108_240417	MW033	17 Apr 2024	EB2413950019	Field_D	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.17	<0.05	<0.05	0.17
0861_QC208_240417	MW033	17 Apr 2024	N24/009285	Interlab_D	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	0.1	<0.01	<0.01	0.1
0861_MW034_240419	MW034	19 Apr 2024	EB2413910018	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW035_240416	MW035	16 Apr 2024	EB2413910019	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW036_240418	MW036	18 Apr 2024	EB2413910020	Normal	**0.08**	<0.02	<0.02	0.08	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.08
0861_MW037_240415	MW037	15 Apr 2024	EB2413910021	Normal	**8.98**	2.43	2.35	8.14	0.08	***0.84***	<0.02	0.3	0.36	1.86	0.23	0.12	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	16.7
0861_QC106_240415	MW037	15 Apr 2024	EB2413950001	Field_D	**8.91**	2.6	2.48	8.18	0.09	***0.73***	<0.02	0.3	0.39	1.97	0.22	0.13	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	17.1
0861_QC206_240415	MW037	15 Apr 2024	N24/009271	Interlab_D	**5.94**	2	1.4	5.5	0.041	***0.44***	<0.01	0.3	0.39	1.7	0.2	0.086	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	12.06
0861_MW041_240503	MW041	03 May 2024	EB2414902001	Normal	**0.49**	0.23	0.04	0.16	<0.02	***0.33***	<0.02	0.2	0.3	0.3	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	1.81
0861_MW042_240419	MW042	19 Apr 2024	EB2413910022	Normal	**0.21**	0.02	<0.02	0.06	<0.02	***0.15***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.23
0861_MW043_240419	MW043	19 Apr 2024	EB2413910023	Normal	**0.46**	0.21	0.06	0.22	<0.02	***0.24***	<0.02	<0.1	<0.02	0.08	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.82
0861_MW044_240418	MW044	18 Apr 2024	EB2413910024	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW046_240415	MW046	15 Apr 2024	EB2413910025	Normal	**36.3**	1.29	1.29	9.48	0.99	***26.8***	<0.05	3.7	5.04	5.03	1.13	**2.18**	0.09	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.12	<0.12	<0.05	<0.05	<0.05	3.43	<0.20	<0.05	60.6
0861_MW047_240415	MW047	15 Apr 2024	EB2413910026	Normal	**15.5**	0.98	0.85	7.62	0.37	***7.85***	<0.02	0.5	0.54	1.29	0.13	0.29	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	20.4
0861_MW048_240419	MW048	19 Apr 2024	EB2413910027	Normal	**2.63**	0.14	0.14	1.13	0.04	***1.5***	<0.02	<0.1	0.03	0.14	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.15
0861_MW050_240419	MW050	19 Apr 2024	EB2413910028	Normal	**0.22**	0.03	<0.02	0.07	<0.02	***0.15***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.25
0861_MW054D_240416	MW054D	16 Apr 2024	EB2413937002	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW054S_240416	MW054S	16 Apr 2024	EB2413937001	Normal	**0.22**	<0.02	<0.02	0.09	<0.02	***0.13***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.22
0861_MW055D_240416	MW055D	16 Apr 2024	EB2413910030	Normal	0.06	<0.02	<0.02	0.03	<0.02	***0.03***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.06
0861_MW055S_240416	MW055S	16 Apr 2024	EB2413910029	Normal	**2.72**	0.2	0.26	1.6	0.08	***1.12***	<0.02	<0.1	0.04	0.18	0.04	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	3.6
0861_MW056I_240416	MW056I	16 Apr 2024	EB2413946017	Normal	<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	<0.06	<0.02	<0.06	<0.06	<0.06	<0.06	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02
0861_MW056S_240416	MW056S	16 Apr 2024	EB2413946001	Normal	0.01	<0.02	<0.02	<0.01	<0.02	***0.01***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01
0861_QC107_240416	MW056S	16 Apr 2024	EB2413950002	Field_D	0.01	<0.02	<0.02	<0.01	<0.02	***0.01***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.01
0861_QC207_240416	MW056S	16 Apr 2024	N24/009272	Interlab_D	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0861_MW057I_240503	MW057I	03 May 2024	EB2414909002	Normal	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01
0861_MW057S_240503	MW057S	03 May 2024	EB2414909001	Normal	**0.42**	0.07	0.06	0.27	<0.02	***0.15***	<0.02	<0.1	<0.02	0.02	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.61
0861_MW309_240415	MW309	15 Apr 2024	EB2413910112	Normal	0.03	<0.02	<0.02	<0.01	<0.02	***0.03***	<0.02	<0.1	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.03

LOR is limit of reporting
µg/L is micrograms per litre
'-' denotes no analysis undertaken
'<' denotes concentration is less than
NEMP is National Environmental Mangement Plan
HEPA is Heads of Environmental Protection Agencies
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values
Note that a concentration equal to the assessment criterion is not considered an exceedance.

Property ID	Location ID	Sample Date	Location	DO (mg/L)	EC (µS/cm)	pH	Er (mV)	Eh (mV)	Temp (°C)	Description	Odour	Sheen	Comments
0861	SW002	10/04/2024	Drain	2.08	175.1	6.75	-18.2	186.8	22.6	Clear, moderate turbidity	No odour	Slight sheen	Grab sample
0861	SW003	10/04/2024	Drain	7.68	240.7	8.75	5.9	210.9	26.5	Clear, low turbidity	No odour	No sheen	Grab sample
0861	SW004	9/04/2024	Warrill Creek	5.09	315.2	7.23	50.6	255.6	24.1	Light brown, slightly turbid	No odour	No sheen	Grab sample
0861	SW005	9/04/2024	Warrill Creek	4.07	315.4	7.34	54.1	259.1	24	Brown, moderately turbid	No odour	No sheen	Grab sample
0861	SW008	12/04/2024	Drain	4.76	71.6	7.2	44.9	249.9	24.3	Brown, moderately turbid	Sewage odour	No sheen	Grab sample
0861	SW009	12/04/2024	Warrill Creek	5.44	362.1	7.41	18.6	223.6	24.3	Brown, moderately turbid	No odour	No sheen	Grab sample
0861	SW011	9/04/2024	Drain	1.57	389.6	6.95	3.5	208.5	26.3	Brown, low turbidity	Organic odour	Biosheen	Grab sample
0861	SW015	9/04/2024	Warrill Creek	3.97	338.7	7.22	13.3	218.3	26.9	Brown, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW016	9/04/2024	Warrill Creek	4.74	320	7.26	48.7	253.7	24.2	Brown, moderately turbid	No odour	No sheen	Grab sample
0861	SW018	9/04/2024	Warrill Creek	4.95	324.5	7.44	37.4	242.4	25.5	Brown, highly turbid	No odour	No sheen	Grab sample
0861	SW020	9/04/2024	Warrill Creek	4.76	327.1	7.93	28.1	233.1	25.7	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW021	10/04/2024	Drain	2.57	253.1	6.89	8.1	213.1	20.6	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW025	12/04/2024	Bremer River	3.78	355.4	7.19	20.9	225.9	25.2	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW026	11/04/2024	Warrill Creek	3.52	351.5	7.25	-5.7	199.3	26.2	Brown, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW027	9/04/2024	Drain	4.11	500	7.69	17.9	222.9	25.2	Brown, low turbidity	No odour	Biosheen	Grab sample
0861	SW028	9/04/2024	Drain	8.01	501.1	7.61	100.6	305.6	22	Brown, moderate turbidity	Organic odour	Biosheen	Grab sample
0861	SW030	9/04/2024	Drain	3.95	292.8	7.35	5.2	210.2	25.1	Clear, highly turbid	Organic odour	No sheen	Grab sample
0861	SW033	19/04/2024	Drain	-	-	-	-	-	-	-	-	-	Dry
0861	SW034	9/04/2024	Warrill Creek	3.86	322	7.47	11.4	216.4	25	Light brown, moderately turbid	No odour	No sheen	Grab sample
0861	SW036	11/04/2024	Bremer River	3.77	315.4	7.2	-31	174	23.6	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW037	10/04/2024	Drain	3.39	382.2	6.85	-9.6	195.4	24.2	Brown, moderate turbidity	No odour	Biosheen	Grab sample
0861	SW038	18/04/2024	Drain	-	-	-	-	-	-	-	-	-	Dry
0861	SW039	12/04/2024	Bremer River	3.98	321.2	7.16	8.7	213.7	24.8	Brown, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW040	12/04/2024	Bremer River	3.8	352.6	6.75	11.9	216.9	21.5	Brown, highly turbid	No odour	No sheen	Grab sample
0861	SW041	12/04/2024	Drain	6.53	251.7	7.38	1.4	206.4	21.3	Brown, low turbidity	No odour	Biosheen	Grab sample
0861	SW043	11/04/2024	Warrill Creek	5.09	350.8	7.36	4	209	23.3	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW045	12/04/2024	Bremer River	5.28	356.8	7.23	11.8	216.8	21.4	Brown, moderate turbidity	No odour	Biosheen	Grab sample
0861	SW047	11/04/2024	Bremer River	4.2	315.5	7.22	-12.7	192.3	22.8	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW048	11/04/2024	Drain	-	-	-	-	-	-	-	-	-	Dry
0861	SW049	10/04/2024	Drain	1.95	156.2	6.26	27.4	232.4	22.4	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW050	11/04/2024	Bremer River	4.01	316	7.23	10.2	215.2	22.4	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW051	11/04/2024	Bremer River	1.98	649	7.21	-5.2	199.8	20.9	Brown, moderate turbidity	Organic odour	No sheen	Grab sample
0861	SW052	10/04/2024	Bremer River	3.87	315.8	7.2	-6.8	198.2	23.7	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW053	18/04/2024	Drain	5.55	666	8.07	-36.7	168.3	26.1	Green, low turbidity	No odour	No sheen	Grab sample
0861	SW056	9/04/2024	Drain	2.31	324.8	7	-31.3	173.7	24.9	Clear, moderate turbidity	No odour	No sheen	Grab sample
0861	SW059	9/04/2024	Drain	3.82	416.2	7.41	-15.4	189.6	23.7	Clear, moderate turbidity	Sulfuric odour	No sheen	Grab sample
0861	SW064	18/04/2024	Drain	0.56	383.4	6.64	-49.1	155.9	25.7	Brown, highly turbid	Sulfuric odour	No sheen	Grab sample
0861	SW067	18/04/2024	Drain	-	-	-	-	-	-	-	-	-	Dry
0861	SW076	9/04/2024	Drain	4.86	490	7.38	10	215	27	Brown, moderately turbid	Organic odour	No sheen	Grab sample
0861	SW079	18/04/2024	Drain	2.16	361.6	6.94	-43.9	161.1	21	Brown, highly turbid	Organic odour	Biosheen	Grab sample
0861	SW080	15/04/2024	Drain	3.05	568	7.68	-42.9	162.1	23.5	Clear, modertate turbidity	No odour	No sheen	Grab sample
0861	SW088	10/04/2024	Bremer River	3.85	316.3	7.19	2.9	-	24.1	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW089	10/04/2024	Bremer River	3.16	324.2	7.17	3.4	208.4	24.3	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW090	10/04/2024	Bremer River	4.15	310.2	7.17	13	218	22.9	Brown, low turbidity	No odour	No sheen	Grab sample
0861	SW091	10/04/2024	Bremer River	7.01	1521	6.51	197.2	402.2	16.9	Clear, slight turbidity	No odour	No sheen	Grab sample
0861	SW094	11/04/2024	Bremer River	4.1	311.4	7.19	-3.4	201.6	23.3	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW098	12/04/2024	Bremer River	4.07	317.9	7.21	6.8	211.8	21.6	Brown, moderate turbidity	No odour	No sheen	Grab sample
0861	SW099	11/04/2024	Warrill Creek	1.21	702	7.45	21.7	226.7	21.2	Brown, moderate turbidity	Organic odour	No sheen	Grab sample
0861	SW100	11/04/2024	Warrill Creek	4.32	358	7.36	0.2	205.2	22.5	Brown, low turbidity	No odour	No sheen	Grab sample

Notes
DO - Dissolved Oxygen
EC - Electrical Conductivity
Er - Uncorrected Oxidation Reduction Potential
Eh - Corrected Oxidation Reduction Potential
` - no data
Er converted to Eh by adding 205 based on a YSI with Ag/AgCl sensor calibrated to a 3.5 molar KCL solution
mg/L - milligrams per litre
µS/cm - microsiemens per centimetre
mV - millivolts
°C - degrees Celsius

		Sum of PFHxS and PFOS	Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids										Perfluoroalkyl Sulfonamides							Acids				Sum of PFAS
			PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	
	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
	EQL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.05	0.05	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PFAS NEMP 2020 Freshwater 95%							*0.13*						*220*																	
PFAS NEMP 2020 Freshwater 99%							***0.00023***						***19***																	
PFAS NEMP 2020 Recreational Water		**2**											**10**																	

Field ID	Location	Date	Sample Code	Sample Type																										
0861_SW008_240412	SW008	12 Apr 2024	EB2413910035	Normal	**4.19**	<0.34	0.23	1.63	0.08	***2.56***	<0.02	0.1	0.34	0.58	0.12	0.18	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.05	0.08	<0.05	<0.05	5.9

Notes:
LOR is limit of reporting
µg/L is micrograms per litre
'-' denotes no analysis undertaken
'<' denotes concentration is less than
NEMP is National Environmental Mangement Plan
HEPA is Heads of Environmental Protection Agencies
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values
Note that a concentration equal to the assessment criterion is not considered an exceedance.

Location ID	Sample Date	Location	Sample Description	Odour	Notes on River Conditions
SD002	10/04/2024	Drain	Dark brown clay with roots.	No odour	Manmade drainage channel around 10m width, running west to east. Water is shallow, ~0.1m depth, pooled, clear with bright green algae and aquatic plants. Long grass in channel. Sediment slug to the east of the culvert.
SD003	10/04/2024	Drain	Pale brown Gravel. Gravel is fine.	No odour	Wide and deep drainage channel, draining north west from the airstrip. Around 40m width and 10m depth. Steep eroded bank to the south west. Heavily vegetated channel with grass, reeds and trees. Reenforced north east bank with large angular boulders.
SD004	9/04/2024	Warrill Creek	Dark brown and grey Clay with rootlets.	Organic odour	Abundant woody debris in river channel. Eroded southern bank. Brown, flowing water, around 0.5m depth. Flowing west to east. Evidence of flooding (stacked debris).
SD005	9/04/2024	Warrill Creek	Brown Clay, rootlets.	Organic odour	Brown, flowing water (west to east). Appears to be around 0.5m maximum depth. Clear, brown water with fish present. Established riparian vegetation on north bank. Steep eroded southern bank with no riparian vegetation, followed by grassed floodplain to the south. Woody debris within river channel.
SD008	12/04/2024	Drain	Dark brown Silt.	Organic odour	Still, pooled water with gently sloping grassed banks. Reeds and grass within channel. Flows west to east. Maximum 1m depth. Maximum 5m width.
SD009	12/04/2024	Warrill Creek	Brown sandy Clay. Sand is fine.	No odour	Flowing, west to east, slightly cloudy, brown water. Around 1m depth, and around 10m width. Vegetated sediment island within creek with established trees and grasses. Woody debris within channel. Fish present. Southern bank issteep and eroded with no vegetation. North bank is gradually sloping.
SD011	9/04/2024	Drain	Light brown sandy Clay.	Organic odour	Shallow, slowly flowing drainage channel. <40cm maximum depth. No riparian vegetation. Grassed banks. Cobble reenforcement of banks. Aquatic plants in drain.
SD015	9/04/2024	Warrill Creek	Dark brown sandy Clay with rootlets.	Organic odour	Gently flowing west to east. Slightly cloudy water. ~0.3m depth. Heavily vegetated on north bank with established trees and native grasses. Gently sloping north bank. South bank is steep with visible erosion and less vegetation.
SD016	9/04/2024	Warrill Creek	Dark brown sandy Clay with rootlets.	Organic odour	Still, clear water, brown in colour. Established riparian vegetation on north bank. Woody debris within channel. Fish observed in creek. Rubbish filled embankment ~20m north consists of concrete slabs, construction material, steel debris.
SD018	9/04/2024	Drain entering Warrill Creek	Dark brown gravelly Sand.	No odour	Clear, gently flowing water W to E. Approximately 0.3m depth. Wood debris in river channel. Large angular cobbles in channel (~30 cm). Well vegetated on both banks. Creek bed contains native grass vegetation. Lots of rubbish observed, including bottles, concrete, metal, and asbestos. Construction rubble in creek channel.
SD020	9/04/2024	Warrill Creek	Dark brown Clay with rootlets.	Organic odour	Clear, still water. Heavily vegetated riparian banks to the north and south. Water gently flowing west to east. Water depth maximum 0.3m. Evidence of flooding (debris in trees).
SD021	10/04/2024	Drain	Brown clayey Sand.	Organic odour	Shallow, pooled, still water around 0.2m maximum depth. Thick grass and vegetation surrounding sample location.
SD025	12/04/2024	Bremer River	Brown sandy Clay. Sand is fine.	No odour	Still pooled water. Flow direction south to north evidenced by debris build up. Black water with small aquatic surface water plants. Depth >1m, width ~20m. Sparcely vegetated banks. Gradual sloping banks (<10°), with steep drop at waters edge.
SD026	11/04/2024	Warrill Creek	Dark brown Clay with fine sand.	Organic odour	Still, pooled, deep water. Very narrow channel, around 2m width. Heavily vegetated banks with native grasses and well established trees. Steep banks. Woody debris within and across the channel. Flow direction south to north.
SD027	9/04/2024	Drain	Brown gravelly Sand.	No odour	Heavily modified creek bed. Vegetated with reeds and trees. Flow direction east to west. Manmade cobble embankment to the south. Grassed, eroding bank to the north.
SD028	9/04/2024	Frogs Hollow Gully (Drain)	Brown clayey Sand with rootlets.	Sulfuric odour	Pooled water channel with aquatic plants on the surface. Fish and tadpoles present. Long grass surrounding the channel (~1m high). No riparian vegetation. Relatively flat catchment (<5°) surrounding the channel. Water is black. Unable to see the bottom. Channel is ~ 2m width, and around 0.5m maximum depth. Appears to flow west to east.
SD030	9/04/2024	Drain	Dark brown Clay.	Organic odour	Drain beside road. Flat land surrounding. Manmade banks. No riparian vegetation. Grassed mown banks.
SD033	19/04/2024	Drain	Dark brown and orange mottle silty Clay.	No odour	Gently flowing east to west. Man made channel capturing runoff from training area and release from new water treatment tanks. Ponds immediatley adjacent to the south. Currently empty. Channel bed contains large angular cobbles and reenforcement wire.
SD034	9/04/2024	Warrill Creek	Dark brown sandy Clay.	No odour	Still brown water ~0.3m depth. Heavily vegetated riparian zones on both banks. Native grasses within channel. Rubbish observed in northern bank, including porcelain, glass, and rubber. Narrow drainage channel entering creek from the north to south at sample location.
SD036	11/04/2024	Bremer River	Brown sandy Clay. Sand is fine.	Organic odour	Pooled deep water in channel. Unable to see the bottom. Large established gums and trees in channel. Aquatic plants covering entire surface. Western bank vegetated with grass and trees. Eastern bank is gently sloping, vegetated with native grasses. Channel is within a regeneration area.
SD037	10/04/2024	Drain	Grey Silt with rootlets.	No odour	Minimal water <0.1m depth. Still, pooled, and stagnant water. Very shallow drainage channel with mown grassed banks. Tall reeds around 2m high within channel.
SD038	18/04/2024	Drain	Dark brown Clay.	Organic odour	Still poolled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area.
SD039	12/04/2024	Bremer River	Grey brown clayey Sand. Sand is fine.	No odour	Still pooled water beneath bridge. <0.2m depth. Large subangular boulders and cobbles within channel. Creek bed is vegetated with reeds and grasses and well established trees. Flow direction is S to N evidenced by woody debris within the creek.
SD040	12/04/2024	Bremer River	Dark brown gravelly Clay.	No odour	Large, deep, still dam, with brown coloured water. Around 20m width. Depth >1m. Heavily vegetated banks on both sides. Well established trees and native grasses on both gently sloping banks. Vegetated bank around 50m width on north side. Drainage channel entering the dam from the NW. Sample taken around 2m upstream of drainage channel.
SD041	12/04/2024	Drain	Brown sility Sand with organic matter.	No odour	Clear, black, pooled, still water. Maximum 0.3m depth. Channel is heavily vegetated with tall reeds. Large angular boulders within channel.
SD043	11/04/2024	Warrill Creek	Brown silty Gravel.	No odour	Clear, flowing creek. Flowing south to north. Erosion channels on eastern bank beneath the bridge. Black cracking clays. Banks are well vegetated. Channel is around 5m width.
SD045	12/04/2024	Bremer River	Light brown sandy Clay.	No odour	Still, clear, brown water, flowing west to east. Small aquatic plants on surface. Well vegetated banks on both sides with native grasses and trees.Gently sloping banks with a steep drop off next to sampling point. Woody debris along banks.
SD047	11/04/2024	Bremer River	Brown Clay.	Organic odour	Deep pooled water. Very steep bank on the western side. Channel around 40m width. Vegetated island with well established gums and trees within the river channel.
SD048	11/04/2024	Drain	No sediment present.	-	Drainage leads from hangar to the north ~40m. Land slopes to the south west. Mowed grassed area.
SD049	10/04/2024	Drain	Grey brown silty Clay.	Organic odour	Large dam at the bottom of a grassy slope. Around 100m diameter. Deep, still, brown water. Aquatic reeds surrounding the banks. Ducks and fish present. Slopes gently from the east to the west.
SD050	11/04/2024	Bremer River	Brown sandy Clay with some fine sand.	No odour	Manmade drainage channel around 10m width, running W to E. Water is still and shallow. Around 0.2m depth. Banks are gently sloping and stabilised with large angular boulders. Aquatic plants within channel.
SD051	11/04/2024	Bremer River	Dark brown Clay, rootlets. Some fine sand.	No odour	Deep pooled, still water. Flow direction N to S evidenced by flood debris in trees. Very steep embankment. Channel around 5m width. Green scum covering entire surface. Woody debris within channel. Overland flow across embankments evident with rubbish (corrugated iron) running W to E. Heavily vegetated banks with native grasses, reeds, and trees.
SD052	10/04/2024	Bremer River	Dark brown Clay.	No odour	Still, pooled, deep water. Narrow channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is W to E evidenced by flood debris in trees. Very steep banks.
SD053	18/04/2024	Drain	Green Sand, organic matter.	No odour	Manmade drainage channel surrounding the runway. Water flowing south to north. Very shallow. Concrete base with 4 drains entering channel. Green algae in water. Clear. Very gently sloping mown grassed banks.
SD056	9/04/2024	Drain	Brown Clay, roots.	No odour	Flat surrounding land. Very gently sloping banks. Channel is around 2m maximum width. Depth around 0.2m max. Grassed mown banks. Reeds and aquatic plants within channel. Still, pooled water.
SD059	9/04/2024	Drain	Dark brown silty Sand.	Organic odour	Still pooled water >1m depth, ~3m width. Appears to flow west to east (based on the gradient of the land). Large fish observed. Man made embankments with large angular cobble bank reenforcement. Water is clear with a brown/green colour. Aquatic plants on surface. Reeds on banks. Surrounded by open, mown, grassed area. H37
SD064	18/04/2024	Drain	Dark brown Clay.	Organic odour	Very shallow, narrow drainage channel bordering the runway. Mown grassed area surrounding sample location.
SD067	18/04/2024	Drain	Dark brown soft Clay.	No odour	Small drainage channel. Concrete culvert contains dark green water. Culvert is covered with a grill. Very shallow channel. Mown grassed banks. Dry during visit.
SD076	9/04/2024	Drain	Dark brown Gravel, rootlets.	Organic odour	Flat surrounding land. Very shallow banks. Channel is around 10m width. Very shallow water flowing E to W (~10cm). Channel vegetated with reeds around 1.5m high
SD079	18/04/2024	Drain	Pale brown and green Silt.	No odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Very tall reeds in channel. Green and brown algae in channel. No flow. Shallow. Around 0.2m depth. Very gently sloping mown grassed banks.
SD080	15/04/2024	Drain	Brown sandy Clay.	No odour	Manmade drainage channel bordering the runway. 2m high reeds in channel. Sediment build up on the southern side of the culvert. Very gently sloping mown grassed banks.
SD088	10/04/2024	Bremer River	Dark brown silty Clay with some fine sand.	No odour	Deep, wide channel. Entire surface is covered with small aquatic plants. Gently sloping vegetated banks. Woody debris within channel. Flow direction is west to east.
SD089	10/04/2024	Bremer River	Dark brown silty Clay.	No odour	Still, pooled, shallow water. Entire surface is covered with small aquatic plants. Woody debris across channel. Fallen trees across the banks. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD090	10/04/2024	Bremer River	Dark brown Clay.	No odour	Still, pooled, deep water. Channel is around 3m width. Entire surface is covered with small aquatic plants. Woody debris in channel. Banks are heavily vegetated. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD091	10/04/2024	Bremer River	Dark brown Clay.	No odour	Still, pooled, clear water. Small aquatic plants on surface. Woody debris within creek channel. Fallen trees across channel. Channel around 3m width. Water around 0.3m depth. Heavily vegetated banks. Banks are fenced off for regeneration. Flow direction is south to north evidenced by flood debris in trees. Very steep banks.
SD094	11/04/2024	Bremer River	Brown Clay.	Organic odour	Shallow, pooled water in creek channel. Not flowing, clear, brown. Large woody debris within channel. Vegetated banks. Steep easterly bank, gently sloping on the west. Western bank is a revegetation area. Flow direction is north to south, evidenced by flood debris within the channel. Drainage channel entering the creek from the northwest to southeast. Heavily eroded.
SD098	12/04/2024	Bremer River	Brown sandy Clay with some gravel.	No odour	Still pooled water beneath bridge. ~0.5m depth. Clear, with a brown colour. Water flow north to south evidenced by debris build up within creek. Film of white/green substance on water surface. Geofab on embankments. Vegetated banks on both sides with native grass and trees.
SD099	11/04/2024	Warrill Creek	Dark brown Clay, rootlets.	Organic odour	Deep, wide channel. Brown, turbid water. Gently flowing south to north. Woody debris along banks. Grassed bank to the west. Vegetated with well established trees to the east.
SD100	11/04/2024	Warrill Creek	Dark brown Clay.	Organic odour	Deep, narrow channel, gently flowing east to west. Clear, green/brown colour. Flood debris in trees and on banks. Very steep north bank. Long grass and vegetation on south bank.

						Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids										Perfluoroalkyl Sulfonamides							Fluorotelomer Sulfonic Acids				
					Sum of PFHxS and PFOS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum of PFAS
	Units				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	EQL				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	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0005	0.0005	0.0005	0.0005	0.0002
Field ID	**Location**	**Date**	**Sample Code**	**Sample Type**																												
0861_SD002_240410	SD002	10 Apr 2024	EB2413910071	Normal	0.0098	<0.0002	<0.0002	0.0008	<0.0002	0.009	<0.0002	<0.001	0.0003	0.0005	0.0003	0.0004	0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0117
0861_SD003_240410	SD003	10 Apr 2024	EB2413910072	Normal	0.0013	<0.0002	<0.0002	<0.0002	<0.0002	0.0013	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0013
0861_SD004_240409	SD004	09 Apr 2024	EB2413910073	Normal	0.0289	<0.0002	<0.0002	0.0006	<0.0002	0.0283	<0.0012	<0.001	0.0006	0.0005	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0305
0861_SD005_240409	SD005	09 Apr 2024	EB2413910074	Normal	0.0031	<0.0002	<0.0002	0.0002	<0.0002	0.0029	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0033
0861_SD008_240412	SD008	12 Apr 2024	EB2413910075	Normal	0.03	<0.0003	0.0003	0.0024	<0.0002	0.0276	0.0053	<0.001	<0.0002	0.0006	<0.0002	0.0003	<0.0002	<0.0002	0.0005	0.0007	<0.0005	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.039
0861_SD009_240412	SD009	12 Apr 2024	EB2413910076	Normal	0.0064	<0.0002	<0.0002	0.0003	<0.0002	0.0061	<0.0007	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0064
0861_SD011_240409	SD011	09 Apr 2024	EB2413910077	Normal	0.0407	<0.0003	0.0003	0.0038	<0.0002	0.0369	<0.0002	<0.001	0.0002	0.0009	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0426
0861_SD015_240409	SD015	09 Apr 2024	EB2413910078	Normal	0.0062	<0.0002	<0.0002	<0.0002	<0.0002	0.0062	<0.0252	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0062
0861_SD016_240409	SD016	09 Apr 2024	EB2413910079	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0024	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD018_240409	SD018	09 Apr 2024	EB2413910080	Normal	0.0036	<0.0002	<0.0002	0.0002	<0.0002	0.0034	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0036
0861_SD020_240409	SD020	09 Apr 2024	EB2413910081	Normal	0.0043	<0.0002	<0.0002	0.0002	<0.0002	0.0041	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0043
0861_QC101_240409	SD020	09 Apr 2024	EB2413950003	Field_D	0.0034	<0.0002	<0.0002	<0.0002	<0.0002	0.0034	<0.0004	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0012	<0.0012	<0.0012	<0.0012	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0034
0861_QC201_240409	SD020	09 Apr 2024	N24/009273	Interlab_D	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
0861_SD021_240410	SD021	10 Apr 2024	EB2413910082	Normal	0.317	<0.0010	0.0011	0.0136	<0.0020	0.303	0.0134	<0.005	<0.0010	0.0016	<0.0010	0.0028	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	0.004	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.34
0861_SD025_240412	SD025	12 Apr 2024	EB2413946004	Normal	<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	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_QC105_240412	SD025	12 Apr 2024	EB2413950007	Field_D	<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	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_QC205_240412	SD025	12 Apr 2024	N24/009277	Interlab_D	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0002
0861_SD026_240411	SD026	11 Apr 2024	EB2413946006	Normal	0.0078	<0.0002	<0.0002	0.0003	<0.0002	0.0075	<0.0002	<0.001	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0013	<0.0013	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0078
0861_QC103_240411	SD026	11 Apr 2024	EB2413950005	Field_D	0.0077	<0.0002	<0.0002	0.0002	<0.0002	0.0075	<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	<0.0002	<0.0012	<0.0012	<0.0012	<0.0012	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0077
0861_QC203_240411	SD026	11 Apr 2024	N24/009275	Interlab_D	0.0046	<0.001	<0.001	<0.001	<0.001	0.0046	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	0.0046
0861_SD027_240409	SD027	09 Apr 2024	EB2413910083	Normal	0.0471	<0.0002	0.0005	0.0049	<0.0008	0.0422	<0.0002	<0.001	<0.0002	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0006	<0.0002	<0.0006	<0.0006	<0.0006	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0486
0861_SD028_240409	SD028	09 Apr 2024	EB2413910084	Normal	0.0158	<0.0002	<0.0002	0.0008	<0.0002	0.015	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0158
0861_QC100_240409	SD028	09 Apr 2024	EB2413950009	Field_D	0.015	<0.0002	<0.0002	0.0005	<0.0002	0.0145	0.0004	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0154
0861_QC200_240409	SD028	09 Apr 2024	N24/009279	Interlab_D	0.015	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	0.015
0861_SD030_240409	SD030	09 Apr 2024	EB2413910085	Normal	0.189	<0.0005	0.0011	0.0128	<0.0014	0.176	<0.0005	<0.002	0.0018	0.003	0.0014	0.0017	0.0005	0.0013	0.0022	0.003	<0.0012	<0.0005	<0.0012	<0.0012	<0.0012	<0.0005	<0.0005	<0.0005	0.0014	<0.0005	<0.0005	0.206
0861_SD033_240409	SD033	09 Apr 2024	EB2413910086	Normal	0.332	0.0025	0.003	0.0273	<0.0024	0.305	0.257	<0.002	0.0023	0.0105	0.0034	0.0087	0.0016	0.0038	0.0344	0.11	0.0622	0.0289	<0.0012	<0.0012	<0.0012	<0.0012	<0.0005	<0.0005	<0.0005	<0.0005	0.0138	0.0843	1.14
0861_SD034_240409	SD034	09 Apr 2024	EB2413910087	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0026	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD036_240411	SD036	11 Apr 2024	EB2413910088	Normal	<0.0002	0.006	<0.0002	<0.0002	<0.0002	<0.0018	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.006
0861_SD037_240410	SD037	10 Apr 2024	EB2413910089	Normal	0.339	0.0025	0.0029	0.0262	<0.0034	0.313	0.0046	<0.002	0.0017	0.0046	0.001	0.002	<0.0005	0.0018	0.0013	<0.0005	<0.0013	<0.0005	<0.0013	<0.0013	<0.0013	<0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.363
0861_SD038_240418	SD038	18 Apr 2024	EB2413910090	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0016	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD039_240412	SD039	12 Apr 2024	EB2413946008	Normal	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0007	<0.0013	<0.0005	<0.0013	<0.0013	<0.0013	<0.0013	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0006
0861_SD040_240412	SD040	12 Apr 2024	EB2413946010	Normal	0.0021	<0.0002	<0.0002	<0.0002	<0.0002	0.0021	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0021
0861_SD041_240412	SD041	12 Apr 2024	EB2413910091	Normal	0.217	0.0015	0.0022	0.0192	<0.0028	0.198	0.0052	<0.002	0.0036	0.006	0.0014	0.0054	<0.0005	<0.0005	0.002	<0.0005	<0.0013	<0.0012	<0.0013	<0.0013	<0.0013	<0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.244
0861_SD043_240411	SD043	11 Apr 2024	EB2413946012	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0012	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD045_240412	SD045	12 Apr 2024	EB2413946014	Normal	0.0045	<0.0002	<0.0002	0.0002	<0.0002	0.0043	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0012	<0.0012	<0.0012	<0.0012	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0045
0861_SD045_240412	SD045	12 Apr 2024	EB2413950006	Field_D	0.0041	<0.0002	<0.0002	0.0002	<0.0002	0.0039	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0012	<0.0012	<0.0012	<0.0012	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0041
0861_QC204_240412	SD045	12 Apr 2024	N24/009276	Interlab_D	0.0021	<0.001	<0.001	<0.001	<0.001	0.0021	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	0.0021
0861_SD047_240411	SD047	11 Apr 2024	EB2413910092	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0018	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD049_240410	SD049	10 Apr 2024	EB2413910093	Normal	0.0874	<0.0005	<0.0005	0.0026	<0.0005	0.0848	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0012	<0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0874
0861_QC102_240410	SD049	10 Apr 2024	EB2413950004	Field_D	0.0975	0.0003	<0.0002	0.0036	<0.0004	0.0939	<0.0004	<0.001	<0.0002	<0.0008	<0.0002	0.0005	<0.0004	<0.0002	<0.0010	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0983
0861_QC202_240410	SD049	10 Apr 2024	N24/009274	Interlab_D	0.069	<0.001	<0.001	<0.001	<0.001	0.069	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	0.069
0861_SD050_240411	SD050	11 Apr 2024	EB2413910094	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0024	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD051_240411	SD051	11 Apr 2024	EB2413910095	Normal	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.0052	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD052_240410	SD052	10 Apr 2024	EB2413910096	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD053_240418	SD053	18 Apr 2024	EB2413910097	Normal	0.0033	<0.0005	0.0005	0.0033	<0.0010	<0.0476	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0006	<0.0005	<0.0005	<0.0012	<0.0005	<0.0012	<0.0012	<0.0012	<0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.005
0861_SD056_240409	SD056	09 Apr 2024	EB2413910098	Normal	0.434	<0.0010	<0.0010	0.0066	<0.0010	0.427	<0.0030	<0.005	<0.0010	0.0014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0020	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.435
0861_SD059_240409	SD059	09 Apr 2024	EB2413910099	Normal	0.625	0.0025	0.0039	0.0372	0.0058	0.588	0.0105	<0.003	0.0043	0.0086	0.0026	0.007	0.0014	0.0019	0.0022	<0.0006	<0.0016	<0.0020	<0.0016	<0.0016	<0.0016	<0.0016	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.676
0861_SD064_240418	SD064	18 Apr 2024	EB2413910100	Normal	0.136	0.001	0.0012	0.0114	0.001	0.125	0.0025	<0.001	0.0002	0.0011	0.0002	0.0007	<0.0002	0.0002	<0.0002	<0.0002	<0.0005	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.145
0861_SD067_240418	SD067	18 Apr 2024	EB2413910101	Normal	1.82	0.0076	0.0136	0.145	0.0098	1.68	0.045	<0.025	<0.0050	0.0271	<0.0050	0.0076	<0.0050	<0.0050	0.0065	<0.0050	<0.0126	<0.0050	<0.0126	<0.0126	<0.0126	<0.0126	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1.95
0861_SD076_240409	SD076	09 Apr 2024	EB2413910102	Normal	0.0929	0.0013	0.0014	0.0119	0.0012	0.081	0.0018	0.001	0.0022	0.0039	0.0014	0.0021	0.0004	<0.0002	0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.111
0861_SD079_240418	SD079	18 Apr 2024	EB2413910103	Normal	0.0371	0.0004	0.0007	0.0075	0.0006	0.0296	0.0004	<0.001	<0.0002	0.0008	0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0407
0861_SD080_240418	SD080	18 Apr 2024	EB2413910104	Normal	0.258	0.0019	0.003	0.0363	0.0043	0.222	0.005	0.001	0.003	0.0046	0.0028	0.0041	0.0028	0.0034	0.0072	0.0036	0.002	0.001	<0.0006	<0.0006	<0.0006	<0.0006	<0.0002	<0.0002	<0.0005	<0.0005	<0.0015	<0.0015	0.317
0861_SD088_240410	SD088	10 Apr 2024	EB2413910105	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD089_240410	SD089	10 Apr 2024	EB2413910106	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0022	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD090_240410	SD090	10 Apr 2024	EB2413910107	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD091_240410	SD091	10 Apr 2024	EB2413910108	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD094_240411	SD094	11 Apr 2024	EB2413910109	Normal	0.0063	<0.0002	<0.0002	<0.0002	<0.0002	0.0063	<0.0002	<0.001	0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.0068
0861_SD098_240412	SD098	12 Apr 2024	EB2413946016	Normal	0.0038	<0.0002	<0.0002	0.0002	<0.0002	0.0036	<0.0002	<0.001	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0005	<0.0002	<0.0012	<0.0005	<0.0005	<0.0005	<0.0012	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.004
0861_SD099_240411	SD099	11 Apr 2024	EB2413910110	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0035	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
0861_SD100_240411	SD100	11 Apr 2024	EB2413910111	Normal	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0031	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002

Notes:
LOR is limit of reporting
mg/kg is milograms per kilogram
'-' denotes no analysis undertaken
'<' denotes concentration is less than
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values

Appendix C

Analytical Data Validation

Appendix C Analytical Data Validation

DATA VALIDATION REPORT

Project No.:	60612563	**Validation by:** SB	**Date:** 21/05/2024
Client:	Department of Defence		
Site:	Royal Australian Airforce Base, Amberley		
Matrix type:	Groundwater, surface water, sediment	**Data verified by:** JP	**Date:** 24/05/2024
No. of primary samples:	37 groundwater, 45 surface water, 48 sediment		
Laboratory:	ALS (Brisbane), NMI (Sydney)	**Project Manager:** JP	
Lab reference:	EB2413910, EB2413937, EB2413946, EB2413950, EB2413951, EB2414902, EB2414909, RN1427801		

Key Issues:	No key QA/QC issues were identified in the field or laboratory datasets that could have a material implication on data interpretation and therefore decision-making on the project. The data are considered appropriate for use to meet the project objectives.

Field QA/QC

Sampling personnel	Sampling was conducted by AECOM environmental scientists between 09 April and 19 April 2024 and on 03 May 2024.
Sampling Methodology	Samples were collected using appropriate methods as identified within the main body of the report and as presented in the SAQP. Field parameters were measured using a water quality meter prior to sample collection. The probe on the water quality meter was decontaminated prior to use.
Chain of Custody	COC documents were completed as per AECOM procedures.
Rinsate Blank	Rinsate blank samples were collected at a frequency of one per day of sampling where appropriate (ten in total) during the monitoring between 09 and 19 April 2024 and on 03 May 2024. Rinsate blank samples were collected from the decontaminated interface probe. Results are presented in **Table C1**. PFAS concentrations were not detected above the LOR in any of the samples tested.
Field Blanks	Field blank samples were collected at a frequency of one per day of sampling (ten in total between 09 and 19 April 2024, and on 03 May 2024 by filling sample containers with laboratory supplied deionised water in the field. All field blanks reported concentrations below the LOR for the analytes tested. See **Table C1**.
Trip Blanks	Trip blank samples were present during the transport of samples collected between for the primary laboratory samples. Trip blanks were present in five batches including two soil trip blanks and three water blanks. All concentrations were reported below the LOR, see **Table C1** (water) and **Table C2** (soil).
Frequency of field QC	Field duplicate (inter-laboratory duplicates) and triplicates (inter-laboratory duplicates) were collected (see **Tables C3** and **C4**). There were six duplicates/triplicate sets for sediment samples, six duplicates/triplicates collected for surface water samples and four groundwater duplicate/triplicates collected The frequency of field QC exceeded the required 10% (11-13%).

Handling and preservation	Primary, duplicate and triplicate samples were received preserved and chilled at the laboratory. All samples were received at the laboratory in appropriate sample containers with no sample container non-compliances noted.
Laboratory QA/QC	
Tests requested/reported	Samples were analysed and reported as requested on the COC.
Holding time compliance	Samples were extracted and analysed within recommended holding times for PFAS. The laboratory scheduled sediment samples for moisture content and the holding time for moisture content testing was exceeded for 15 samples on EB2413910 by between 1 and 3 days. This reflects the short hold time for moisture testing. As the hold time for PFAS was not exceeded, there is no impact on the interpretation of PFAS results.
Laboratory Accreditation	The laboratory analysis was conducted by ALS Environmental Pty Ltd (Brisbane) a National Association of Testing Authorities (NATA) accredited laboratory. The triplicate samples were analysed at the National Measurement Institute (NMI) (Sydney), also a NATA accredited laboratory.
Frequency of laboratory QC	The laboratory reported a sufficient frequency of quality control samples to assess whether the results have been reported to an acceptable accuracy and precision, except for the following: Laboratory duplicates below expected rate of 10% for PFAS in the following batches: • EB2413910 (2.6%) 77 samples in batch • EB2413946 (0.0%) 20 samples in batch • EB2413950 (2.0%) 50 samples in batch • EB2413951 (0.0%) 13 samples in batch • EB2414902 (5.56%) 18 samples in batch • EB2414909 (5.56%) 18 samples in batch Matrix spikes below expected rate of 5% for PFAS in the following batches: • EB2413910 (1.3%) 77 samples in batch • EB2413946 (0.0%) 20 samples in batch • EB2413950 (0.0%) 50 samples in batch • EB2413951 (0.0%) 13 samples in batch The reason for insufficient matrix spikes and laboratory duplicates for these batches is due to the way the laboratory assigns the duplicates and matrix spikes and the availability of additional bottles. The laboratory LIMS assigns laboratory QC to samples in the analytical run; however, the runs may not allocate samples to allow for frequency compliance. However, as all other laboratory QC results met control limits this is not expected to impact data quality.
Method Blank	No method blank non-conformances were reported.
Laboratory duplicate RPDs	One laboratory duplicate non-conformance was reported in EB2413910 where the RPD for PFOS analysed in sample 0861_SD018_240409 slightly exceeded the LOR based limits (54.6%) compared to the target <50%. The laboratory reported that the sample showed poor duplicate recovery due to sample heterogeneity, which was confirmed by visual inspection.
Laboratory control spike recovery	All Laboratory Control Spikes (LCS) recoveries were within control limits.
Matrix spike recovery	All matrix spike (MS) recoveries (where reported) were within control limits, except: • EB2413910 (sediment): MS recovery for PFPeS, PFHxS, PFOS, PFDS, PFHxA for 0861_SD067_240418 was not determined as the background level was greater than or equal to 4x spike level. • EB2413937 (water): MS recovery for an anonymous sample for PFOS was not determined as the background level was greater than or equal to 4x spike level. This indicates that matrix interference may have occurred in the sample from SD018. The laboratory reported that the sample had heterogeneity. Review of the results for

	this sample did not indicate anomalies. This non-conformance is not expected to impact data quality.
Surrogate spike recovery	Surrogate spike recoveries were within control limits for all samples except for the following: • EB2413946 (sediment) surrogate recovery for 13C4-PFOS was greater than the upper data quality objective of 76%-136% for 0861_SD039_240412 and 0861_SD043_240411. • EB2413950 (sediment) surrogate recovery for 13C4-PFOS was greater than the upper data quality objective of 76%-136% for 0861_QC102_240410. • EB2413951 (water) surrogate recovery for 13C4-PFOS was greater than the upper data quality objective of 65%-140% for 0861_QC306_240417. • EB2413951 (water) surrogate recovery for 13C8-PFOA was greater than the upper data quality objective of 71%-133% for 0861_QC306_240417.
QA/QC Data Evaluation	
Comparison of Field Observations and Laboratory Results	No anomalous results between field observations and analysis results were noted.
Data transcription	A random 10% check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and tables generated by AECOM.
Limits of reporting	LORs were sufficiently low to enable assessment against adopted screening levels except for PFOS for NEMP (HEPA, 2020) ecological guideline values for the 99% protection of freshwater species. The potential exists for concentrations of PFOS to be above the adopted guideline, but below the laboratory LOR. This should be taken into consideration when interpreting and using this data quantitatively where results are reported below LOR. LORs in the sample 0861_MW026_240411 (EB2413946-006) were raised due to matrix interference and required dilution prior to analysis.
Field QA/QC RPDs	RPDs for sediment and water samples are reported in **Tables C3** (sediment) and **C4** (surface water and groundwater), respectively. Field duplicate and triplicate RPDs were reported within control limits for all groundwater, surface water and sediment samples except the following (the sample with the higher concentration is in bold). • **0861_SD020_240409** and 0861_QC201_240409 for PFOS (69%) • **0861_SD049_240410** and 0861_QC202_240410 for PFHxS (89%) • **0861_SD026_240411** and 0861_QC203_240411 for PFOS (48%) • **0861_SD045_240412** and 0861_QC204_240412 for PFOS (69%) • **0861_MW037_240415** and 0861_QC206_240415 for PFPeS (51%), PFHxS (39%) and PFOS (62%) • **0861_MW029_240418** and 0861_QC209_240418 for PFPeS (32%), PFHxS (45%), PFHpS (42%), PFOS (61%), PFOA (36%) The RPD non-conformances are all between the primary and triplicate samples and are likely to be due to different extraction techniques used by the primary and secondary laboratories. The elevated RPDs are not considered to affect data interpretation for use in this report. The higher concentration should be adopted in the data interpretation. All remaining samples reported within the control limits.
Other	
Other observations	No other key observations were identified in the field or laboratory datasets that could have a material implication on data interpretation and therefore decision-making on the project.

Table C1 Field Blank, Rinsate Blank and Trip Blank Analytical Results

Lab Report		EB2413951	EB2413951	EB2413951	EB2413951	EB2413951	EB2413950	EB2413950	EB2413950	EB2413950	EB2414902	EB2413951	EB2413951
Field ID		0861_QC400_240409	0861_QC401_240410	0861_QC402_240411	0861_QC403_240412	0861_QC404_240415	0861_QC405_240416	0861_QC406_240417	0861_QC407_240418	0861_QC408_240419	0861_QC409_240503	0861_QC300_240409	0861_QC301_240410
Sampled Date		9/04/2024	10/04/2024	11/04/2024	12/04/2024	15/04/2024	16/04/2024	17/04/2024	18/04/2024	19/04/2024	3/05/2024	9/04/2024	10/04/2024
Sample Type		Field_B	Field_B	Field_B	Field_B	Field_B	Field_B	Field_B	Field_B	Field_B	Field_B	Rinsate	Rinsate
Analyte	**Units**	**EQL**											
PFBS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFPeS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFHxS	µg/L	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
PFHpS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFOS	µg/L	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
PFDS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFBA	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
PFPeA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFHxA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFHpA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFOA	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
PFNA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFUnDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFDoDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
PFTrDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFTeDA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
FOSA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
MeFOSE	µg/L	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
EtFOSE	µg/L	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
MeFOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
EtFOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
MFOSAA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
EtFOSAA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
4:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 FtS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05

Table C1 Field Blank, Rinsate Blank and Trip Blank Analytical Results

Lab Report		EB2413951	EB2413951	EB2413951	EB2413951	EB2413951	EB2413951	EB2413951	EB2414902	EB2413950	EB2413950	EB2413950
Field ID		0861_QC302_240411	0861_QC303_240412	0861_QC304_240415	0861_QC305_240416	0861_QC306_240417	0861_QC307_240418	0861_QC308_240419	0861_QC309_240503	0861_QC501_240405	0861_QC502_240405	0861_QC503_240405
Sampled Date		11/04/2024	12/04/2024	15/04/2024	16/04/2024	17/04/2024	18/04/2024	19/04/2024	3/05/2024	5/04/2024	5/04/2024	5/04/2024
Sample Type		Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Trip_B	Trip_B	Trip_B
Analyte	**Units**	**EQL**										
PFBS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFPeS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFHxS	µg/L	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFHpS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFDS	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFBA	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PFPeA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFHxA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFHpA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFOA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFNA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFUnDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFDoDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFTrDA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFTeDA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
FOSA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MeFOSE	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EtFOSE	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MeFOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EtFOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MFOSAA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EtFOSAA	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
4:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 FtS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Lab Report Number	EB2413950	EB2413950
Field ID	0861_QC504_240405	0861_QC505_240405
Sampled Date	5/04/2024	5/04/2024
Sample Type	Trip_B	Trip_B

Analyte	Units	EQL		
10:2 FTS	mg/kg	0.0005	<0.0005	<0.0005
4:2 FTS	mg/kg	0.0005	<0.0005	<0.0005
6:2 FtS	mg/kg	0.0005	<0.0005	<0.0005
8:2 FTS	mg/kg	0.0005	<0.0005	<0.0005
EtFOSA	mg/kg	0.0005	<0.0005	<0.0005
EtFOSAA	mg/kg	0.0002	<0.0002	<0.0002
EtFOSE	mg/kg	0.0005	<0.0005	<0.0005
MeFOSA	mg/kg	0.0005	<0.0005	<0.0005
MFOSAA	mg/kg	0.0002	<0.0002	<0.0002
MeFOSE	mg/kg	0.0005	<0.0005	<0.0005
PFBS	mg/kg	0.0002	<0.0002	<0.0002
PFBA	mg/kg	0.001	<0.001	<0.001
PFDS	mg/kg	0.0002	<0.0002	<0.0002
PFDA	mg/kg	0.0002	<0.0002	<0.0002
PFDoDA	mg/kg	0.0002	<0.0002	<0.0002
PFHpS	mg/kg	0.0002	<0.0002	<0.0002
PFHpA	mg/kg	0.0002	<0.0002	<0.0002
PFHxA	mg/kg	0.0002	<0.0002	<0.0002
PFNA	mg/kg	0.0002	<0.0002	<0.0002
FOSA	mg/kg	0.0002	<0.0002	<0.0002
PFPeS	mg/kg	0.0002	<0.0002	<0.0002
PFPeA	mg/kg	0.0002	<0.0002	<0.0002
PFTeDA	mg/kg	0.0005	<0.0005	<0.0005
PFTrDA	mg/kg	0.0002	<0.0002	<0.0002
PFUnDA	mg/kg	0.0002	<0.0002	<0.0002
Sum of PFAS	mg/kg	0.0002	<0.0002	<0.0002
Sum of PFHxS and PFOS	mg/kg	0.0002	<0.0002	<0.0002
PFOS	mg/kg	0.0002	<0.0002	<0.0002
PFOA	mg/kg	0.0002	<0.0002	<0.0002
PFHxS	mg/kg	0.0002	<0.0002	<0.0002

Table C3 Sediment Duplicate and Triplicate Analytical Results

Lab Report Number	EB2413910	EB2413950	RPD	RN1427801	RPD	EB2413910	EB2413950	RPD	RN1427801	RPD	EB2413910	EB2413950	RPD	RN1427801	RPD	EB2413946	EB2413950	RPD	RN1427801	RPD
Field ID	0861_SD020_240409	0861_QC101_240409		0861_QC201_240409		0861_SD028_240409	0861_QC100_240409		0861_QC200_240409		0861_SD049_240410	0861_QC102_240410		0861_QC202_240410		0861_SD026_240411	0861_QC103_240411		0861_QC203_240411	
Date	09 Apr 2024	09 Apr 2024		09 Apr 2024		09 Apr 2024	09 Apr 2024		09 Apr 2024		10 Apr 2024	10 Apr 2024		10 Apr 2024		11 Apr 2024	11 Apr 2024		11 Apr 2024	
Sample Type	Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D	
Chemical Name	**Unit**	**EQL**																		
PFBS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	0.0003	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFPeS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFHxS	mg/kg	0.0002	0.0002	<0.0002	0	<0.001	0	0.0008	0.0005	46	<0.001	0	0.0026	0.0036	32	<0.001	**89**	0.0003	0.0002	40	<0.001	0
PFHpS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0004	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFOS	mg/kg	0.0002	0.0041	0.0034	19	<0.002	**69**	0.015	0.0145	3	0.015	0	0.0848	0.0939	10	0.069	21	0.0075	0.0075	0	0.0046	**48**
PFDS	mg/kg	0.0002	<0.0002	<0.0004	0	<0.001	0	<0.0002	0.0004	67	<0.001	0	<0.0005	<0.0004	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFBA	mg/kg	0.001	<0.001	<0.001	0	<0.002	0	<0.001	<0.001	0	<0.002	0	<0.002	<0.001	0	<0.002	0	<0.001	<0.001	0	<0.002	0
PFPeA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0
PFHxA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0008	0	<0.001	0	<0.0004	<0.0002	0	<0.001	0
PFHpA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFOA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	0.0005	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFNA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0004	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFDA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0002	0	<0.001	0	<0.0005	<0.0002	0	<0.001	0
PFUnDA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0010	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0
PFDoDA	mg/kg	0.0002	<0.0002	<0.0010	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0010	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0
PFTrDA	mg/kg	0.0002	<0.0002	<0.0005	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0010	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0
PFTeDA	mg/kg	0.0005	<0.0005	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0	<0.0012	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0
FOSA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0	<0.0005	<0.0010	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
MeFOSE	mg/kg	0.0005	<0.0005	<0.0012	0	<0.005	0	<0.0005	<0.0005	0	<0.005	0	<0.0012	<0.0025	0	<0.005	0	<0.0005	<0.0012	0	<0.005	0
EtFOSE	mg/kg	0.0005	<0.0005	<0.0012	0	<0.005	0	<0.0005	<0.0005	0	<0.005	0	<0.0012	<0.0025	0	<0.005	0	<0.0005	<0.0012	0	<0.005	0
MeFOSA	mg/kg	0.0005	<0.0005	<0.0012	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0	<0.0012	<0.0025	0	<0.002	0	<0.0013	<0.0012	0	<0.002	0
EtFOSA	mg/kg	0.0005	<0.0005	<0.0012	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0	<0.0012	<0.0025	0	<0.002	0	<0.0013	<0.0012	0	<0.002	0
MFOSAA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0010	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0
EtFOSAA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0002	0	<0.002	0	<0.0005	<0.0002	0	<0.002	0
4:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0
6:2 FtS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0
8:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0
10:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C3 Sediment Duplicate and Triplicate Analytical Results

	Lab Report Number	EB2413946	EB2413950	RPD	RN1427801	RPD	EB2413946	EB2413950	RPD	RN1427801	RPD
	Field ID	0861_SD025_240412	0861_QC105_240412		0861_QC205_240412		0861_SD045_240412	0861_QC104_240412		0861_QC204_240412	
	Date	12 Apr 2024	12 Apr 2024		12 Apr 2024		12 Apr 2024	12 Apr 2024		12 Apr 2024	
	Sample Type	Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D	
Chemical Name	**Unit**	**EQL**									
PFBS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFPeS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFHxS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	0.0002	0.0002	0	<0.001	0
PFHpS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFOS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	0.0043	0.0039	10	0.0021	**69**
PFDS	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFBA	mg/kg	0.001	<0.001	<0.001	0	<0.002	0	<0.001	<0.001	0	<0.002	0
PFPeA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0
PFHxA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFHpA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFOA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFNA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
PFDA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0005	0	<0.001	0
PFUnDA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0005	0	<0.002	0
PFDoDA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0
PFTrDA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0
PFTeDA	mg/kg	0.0005	<0.0005	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0
FOSA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.001	0	<0.0002	<0.0002	0	<0.001	0
MeFOSE	mg/kg	0.0005	<0.0005	<0.0005	0	<0.005	0	<0.0012	<0.0012	0	<0.005	0
EtFOSE	mg/kg	0.0005	<0.0005	<0.0005	0	<0.005	0	<0.0012	<0.0012	0	<0.005	0
MeFOSA	mg/kg	0.0005	<0.0005	<0.0005	0	<0.002	0	<0.0012	<0.0012	0	<0.002	0
EtFOSA	mg/kg	0.0005	<0.0005	<0.0005	0	<0.002	0	<0.0012	<0.0012	0	<0.002	0
MFOSAA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0
EtFOSAA	mg/kg	0.0002	<0.0002	<0.0002	0	<0.002	0	<0.0002	<0.0002	0	<0.002	0
4:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0
6:2 FtS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0
8:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.001	0	<0.0005	<0.0005	0	<0.001	0
10:2 FTS	mg/kg	0.0005	<0.0005	<0.0005	0	<0.002	0	<0.0005	<0.0005	0	<0.002	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C4 Water Duplicate and Triplicate Analytical Results

Lab Report Number		EB2413910	EB2413950		RN1427801		EB2413910	EB2413950		RN1427801		EB2413910	EB2413950		RN1427801		EB2413946	EB2413950		RN1427801		EB2413946
Field ID		0861_SW020_240409	0861_QC101_240409	RPD	0861_QC201_240409	RPD	0861_SW028_240409	0861_QC100_240409	RPD	0861_QC200_240409	RPD	0861_SW049_240410	0861_QC102_240410		0861_QC202_240410	RPD	0861_SW026_240411	0861_QC103_240411	RPD	0861_QC203_240411	RPD	0861_SW025_240412
Date		09 Apr 2024	09 Apr 2024		09 Apr 2024		09 Apr 2024	09 Apr 2024		09 Apr 2024		10 Apr 2024	10 Apr 2024		10 Apr 2024		11 Apr 2024	11 Apr 2024		11 Apr 2024		12 Apr 2024
Sample Type		Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D		Normal	Field_D	RPD	Interlab_D		Normal	Field_D		Interlab_D		Normal
Chemical Name	**Unit**	**EQL**																					
PFBS	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	0.07	0.08	13	0.051	31	<0.02	<0.02	0	<0.01	0	<0.02
PFPeS	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	0.04	0.05	22	0.025	46	<0.02	<0.02	0	<0.01	0	<0.02
PFHxS	µg/L	0.01	<0.01	<0.01	0	<0.01	0	<0.01	0.02	67	<0.01	0	0.29	0.3	3	0.28	4	<0.01	<0.01	0	<0.01	0	<0.01
PFHpS	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFOS	µg/L	0.01	<0.01	0.01	0	<0.02	0	0.02	0.02	0	<0.02	0	1	0.92	8	0.75	29	0.01	0.02	67	<0.02	0	<0.01
PFDS	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFBA	µg/L	0.05	<0.1	<0.1	0	<0.05	0	<0.1	<0.1	0	<0.05	0	<0.1	<0.1	0	0.077	0	<0.1	<0.1	0	<0.05	0	<0.1
PFPeA	µg/L	0.02	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	0.06	0.05	18	0.049	20	<0.02	<0.02	0	<0.02	0	<0.02
PFHxA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	0.12	0.12	0	0.092	26	<0.02	<0.02	0	<0.01	0	<0.02
PFHpA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFOA	µg/L	0.01	<0.01	<0.01	0	<0.01	0	<0.01	<0.01	0	<0.01	0	0.04	0.04	0	0.021	62	<0.01	<0.01	0	<0.01	0	<0.01
PFNA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFDA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFUnDA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFDoDA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
PFTrDA	µg/L	0.02	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	<0.02
PFTeDA	µg/L	0.02	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05
FOSA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
MeFOSE	µg/L	0.05	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05
EtFOSE	µg/L	0.05	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05
MeFOSA	µg/L	0.02	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05
EtFOSA	µg/L	0.02	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05
MFOSAA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
EtFOSAA	µg/L	0.01	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02
4:2 FTS	µg/L	0.01	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05
6:2 FtS	µg/L	0.01	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05
8:2 FTS	µg/L	0.01	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05
10:2 FTS	µg/L	0.01	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C4 Water Duplicate and Triplicate Analytical Results

Lab Report Number		EB2413950		RN1427801		EB2413946	EB2413950		RN1427801		EB2413910	EB2413950		RN1427801		EB2413946	EB2413950		RN1427801		EB2413910	EB2413950	
Field ID		0861_QC105_240412	RPD	0861_QC205_240412	RPD	0861_SW045_240412	0861_QC104_240412	RPD	0861_QC204_240412	RPD	0861_MW037_240415	0861_QC106_240415	RPD	0861_QC206_240415	RPD	0861_MW056S_240416	0861_QC107_240416	RPD	0861_QC207_240416	RPD	0861_MW033_240417	0861_QC108_240417	RPD
Date		12 Apr 2024		12 Apr 2024		12 Apr 2024	12 Apr 2024		12 Apr 2024		15 Apr 2024	15 Apr 2024		15 Apr 2024		16 Apr 2024	16 Apr 2024		16 Apr 2024		17 Apr 2024	17 Apr 2024	
Sample Type		Field_D		Interlab_D		Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D		Normal	Field_D	
Chemical Name	**Unit**	**EQL**																						
PFBS	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	2.43	2.6	7	2	19	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFPeS	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	2.35	2.48	5	1.4	**51**	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFHxS	µg/L	0.01	<0.01	0	<0.01	0	<0.01	<0.01	0	<0.01	0	8.14	8.18	0	5.5	**39**	<0.01	<0.01	0	<0.01	0	<0.01	<0.01	0
PFHpS	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	0.08	0.09	12	0.041	64	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFOS	µg/L	0.01	<0.01	0	<0.02	0	0.01	0.01	0	<0.02	0	0.84	0.73	14	0.44	**62**	0.01	0.01	0	<0.02	0	<0.01	<0.01	0
PFDS	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFBA	µg/L	0.05	<0.1	0	<0.05	0	<0.1	<0.1	0	<0.05	0	0.3	0.3	0	0.3	0	<0.1	<0.1	0	<0.05	0	<0.1	<0.1	0
PFPeA	µg/L	0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	0.36	0.39	8	0.39	8	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0
PFHxA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	1.86	1.97	6	1.7	9	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFHpA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	0.23	0.22	4	0.2	14	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFOA	µg/L	0.01	<0.01	0	<0.01	0	<0.01	<0.01	0	<0.01	0	0.12	0.13	8	0.086	33	<0.01	<0.01	0	<0.01	0	<0.01	<0.01	0
PFNA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFDA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFUnDA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFDoDA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
PFTrDA	µg/L	0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0	<0.02	0	<0.02	<0.02	0
PFTeDA	µg/L	0.02	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0
FOSA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
MeFOSE	µg/L	0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0
EtFOSE	µg/L	0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0	<0.05	0	<0.05	<0.05	0
MeFOSA	µg/L	0.02	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0
EtFOSA	µg/L	0.02	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.02	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0
MFOSAA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
EtFOSAA	µg/L	0.01	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0	<0.01	0	<0.02	<0.02	0
4:2 FTS	µg/L	0.01	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0
6:2 FtS	µg/L	0.01	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	0.19	0.17	11
8:2 FTS	µg/L	0.01	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0
10:2 FTS	µg/L	0.01	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0	<0.01	0	<0.05	<0.05	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C4 Water Duplicate and Triplicate Analytical Results

Lab Report Number	RN1427801		EB2413910	EB2413950		RN1427801	
Field ID	0861_QC208_240417	RPD	0861_MW029_240418	0861_QC109_240418	RPD	0861_QC209_240418	RPD
Date	17 Apr 2024		18 Apr 2024	18 Apr 2024		18 Apr 2024	
Sample Type	Interlab_D		Normal	Field_D		Interlab_D	

Chemical Name	Unit	EQL							
PFBS	µg/L	0.01	<0.01	0	0.68	0.71	4	0.62	9
PFPeS	µg/L	0.01	<0.01	0	0.76	0.73	4	0.55	**32**
PFHxS	µg/L	0.01	<0.01	0	4.73	3.94	18	3	**45**
PFHpS	µg/L	0.01	<0.01	0	0.32	0.3	6	0.21	**42**
PFOS	µg/L	0.01	<0.02	0	4.33	3.82	13	2.3	**61**
PFDS	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
PFBA	µg/L	0.05	<0.05	0	0.1	0.1	0	0.13	26
PFPeA	µg/L	0.02	<0.02	0	0.18	0.16	12	0.14	25
PFHxA	µg/L	0.01	<0.01	0	0.85	0.82	4	0.66	25
PFHpA	µg/L	0.01	<0.01	0	0.15	0.12	22	0.091	49
PFOA	µg/L	0.01	<0.01	0	0.23	0.18	24	0.16	**36**
PFNA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
PFDA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
PFUnDA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
PFDoDA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
PFTrDA	µg/L	0.02	<0.02	0	<0.02	<0.02	0	<0.02	0
PFTeDA	µg/L	0.02	<0.02	0	<0.05	<0.05	0	<0.02	0
FOSA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
MeFOSE	µg/L	0.05	<0.05	0	<0.05	<0.05	0	<0.05	0
EtFOSE	µg/L	0.05	<0.05	0	<0.05	<0.05	0	<0.05	0
MeFOSA	µg/L	0.02	<0.02	0	<0.05	<0.05	0	<0.02	0
EtFOSA	µg/L	0.02	<0.02	0	<0.05	<0.05	0	<0.02	0
MFOSAA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
EtFOSAA	µg/L	0.01	<0.01	0	<0.02	<0.02	0	<0.01	0
4:2 FTS	µg/L	0.01	<0.01	0	<0.05	<0.05	0	<0.01	0
6:2 FtS	µg/L	0.01	0.1	62	<0.05	<0.05	0	<0.01	0
8:2 FTS	µg/L	0.01	<0.01	0	<0.05	<0.05	0	<0.01	0
10:2 FTS	µg/L	0.01	<0.01	0	<0.05	<0.05	0	<0.01	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Appendix D

Chain of Custody Forms

Appendix D Chain of Custody Forms

AECOM

Chain of Custody

COC
Page 1 of 1

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref:
To:
Cc:
Preliminary Report by:
Final Report by:
Lab Quote No: SYD3914

Sampled By: AECOM
Mobile no.: [redacted]
Project Name: QLD_0861_PFASCMP_24
AECOM Project #: 60612563.3.1
Purchase Order No: 60612563.3.1

Specifications: Please report in ESdat format

1. Urgent TAT required? (please circle) 24hr 48hr 5 days! Standard TAT
2. Non-standard TAT Guarantee Required?
3. Is any sediment in the provided waters to be excluded from extractions?
4. Is asbestos material removed from samples to be reported as per NEPM 5.1 ?
5. Special storage requirements? details:
6. Report format: ESdat
7. Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix	Preservative	Container Type	Analysis Required
	0861_MW054S_2404W6	16/4/24	X	X	2 x 20mL	X
	0861_MW054D_2404W6	16/4/24	X	X		X

Environmental Division Brisbane
Work Order Reference
EB2413937

Comments: Please send ESdat files to DLRP.labreports@aecom.com.au and ensure that the files use the PROJECT NAME

Temperature: °C

Report & invoice: [redacted]

Relinquished by: Signed: Date:
Received by: Signed: Date:
Received by: Signed: Date: 24/4/24

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Chain of Custody

COC
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[redacted]

Email reports to: [redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref:
Tel:
Fax:
Preliminary Report to:
Final Report to:
Lab Quote No: SYD1276

Sampled By: AECOM
Mobile no: [redacted]
Project Name: OLD_CRET_PFASOVP_24
AECOM Project #: 60612563.3.1
Purchase Order No: 60612563.3.1

Specifications: Please report in CSdat format

1. Urgent TAT required (please circle): 24hr 48hr 5 days? Standard TAT
2. Fast TAT Samples Prepared?
3. Do any analytes have presence levels to be excluded from exceedance?
4. Is extra sample material required for any samples to be reported to our NEPM 2013?
5. Special storage requirements? (details):
6. Report Format: PDF
7. Project Manager: [redacted]

Results

Analysis Request:

Lab. ID	Sample ID	Sampling Date	Matrix: Water	Soil	Sediment	Preservative: Nitric	Sulfuric	Unpreserved	Other	Container Type and Size	PFAS (PFAS Suite 24)	PFOS
	0861_MW056S_240416	16/4/24		X				X		2 x 20mL	X	
	0861_MW056D_240416	16/4/24		X				X		"	X	
	0861_MW067S_2404			X				X			X	
	0564_MW057_2404			X				X			X	
	0861_SW025_240412	12/4/24		X				X		2 x 20mL	X	
	0861_SD025_240412	12/4/24			X			X		1 x PFAS 250mL	X	
	0861_SW026_240411	11/4/24		X				X		2 x 20mL	X	
	0861_SD026_240411	11/4/24			X			X		1 x PFAS 250mL	X	
	0861_SW039_240412	12/4/24		X				X		2 x 20mL	X	
	0861_SD039_240412				X			X		1 x PFAS 250mL	X	
	0861_SW040_240412			X				X		2 x 20mL	X	
	0861_SD040_240412				X			X		1 x PFAS 250mL	X	
	0861_SW043_240411	11/4/24		X				X		2 x 20mL	X	
	0861_SD043_240411				X			X		1 x PFAS 250mL	X	

Environmental Division
Brisbane
Work Order Reference
EB2413946

Comments: Please send ESdat files to OERP.labreports@aecom.com and ensure that the files use the PROJECT NAME

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Relinquished by: Signed: Date: 24/4/24
Received by: Signed: Date:

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COC
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AECOM Australia Pty Ltd
[redacted]

Email reports to:
[redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No:

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: OLD_0861_PFASUMP '24
AECOM Project #: 60612563.3.1
Purchase Order No: 60612563.3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle) 24hr 48hr 5 days) Standard TAT	
2. Fast TAT Guideline Required?	
3. Is it known if any of these samples contain asbestos?	
4. Is asbestos material removed from samples to be reported as per NEPM 5.1?	
5. Special chemical recommended? (details)	
6. Report format: ESdat	7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix: Water	Matrix: Soil	Preservation: Unpreserved	Preservation: Ice	Container Info & Type	PFAS (plant & animal) (28 analytes)	TOC
	0801_SW045_240412_	12/4/24	X			X	2x250mL	X	
	0801_SD045_240412_			X		X	1x PAR bag/jar	X	
	0861_SW098_2404 12_		X			X	2x250mL	X	
	0861_SD098_2404 12_			X		X	1x PAR bag/jar	X	

Comments: Please send ESdat files to OERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & Invoice: [redacted]

Relinquished by	Signed:	Date:	Received by	Signed:	Date: 24/4/24
Received by	Signed:	Date:	Received by	Signed:	Time:

AECOM

Chain of Custody

COC
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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SYDJ1213

Sampled By: AECOM
Mobile no.: [redacted]
Project Name: OLD 0861_REASOMP_24
AECOM Project #: 60612563 3.1
Purchase Order No: 60612563 3.1

Specifications: Please refer to ESdat Format

	Yes (tick)
1. Report TAT required? (please circle) 24hr 48hr 5 days Standard TAT	
2. Short TAT Guarantee Required?	
3. Is any additional data present in addition to be excluded from calculations?	
4. Is chromatogram required from samples to be reported as per NEPM 2013?	
5. Special storage requirements? (please)	
6. Report Format: ESdat	
7. Project Manager: [redacted]	

Analysis Required

Lab. ID	Sample ID	Sampling Date	Matrix: Water	Matrix: Soil	Preservation: Cool	Preservation: Unpres	Containers	0861 PFAS Suite	0861
	0861_MW002_240419	19/4/24	X			X	2 x 20mL	X	X
	0861_MW005_240415	15/4/24	X			X	"	X	X
	0861_MW006_240418	18/4/24	X			X	"	X	X
	0861_MW007_240418	18/4/24	X			X	"	X	X
	0861_MW012_240415	15/4/24	X			X	"	X	X
	0861_MW020_240415	15/4/24	X			X	"	X	X
	~~0861_MW021_2404~~		X			X		X	X
	0861_MW022_240419	19/4/24	X			X	"	X	X
	0861_MW023_240418	18/4/24	X			X	"	X	X
	0861_MW024_240416	16/4/24	X			X	"	X	X
	~~0861_MW025_2404~~		X			X		X	X
	0861_MW026_240415	15/4/24	X			X	"	X	X
	0861_MW028_240418	18/4/24	X			X	"	X	X
	0861_MW029_240418	18/4/24	X			X	"	X	X

Environmental Division
Brisbane
Work Order Reference
EB2413910

Comments: Please send ESdat files to NCRP.labreports@vertim.com.au and confirm that the files use the PROJECT NAME

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Report & invoice [redacted]

Received by: [redacted] Signed: Date: 24/4/24 Time:

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AECOM Australia Pty Ltd

[redacted]

Email results to: [redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref.
Preliminary Report by
Final Report by
Lab Quote No: SY139419
T-t
Fax:

Sampled By: AECOM
Mobile no. [redacted]

Project Name: QLD_0861_PHASEVP_24

AECOM Project #: 60612583.1

Purchase Order No: 60612583.1

Specifications: Please report in ESdat format

1. Are QLD TAT required? Please circle: 24hr 48hr — Standard TAT
2. Field QA / QC samples required?
3. Is any Sediment (soil / groundwater) suspected to be over 200g? If so advise laboratory
4. Is extraction of analytes to be carried from samples in DC separately per NEPM Sch B?
5. Special storage requirements? Please list:
6. Report Format: ESdat
7. Project Manager: [redacted]

Yes (Y) / No (N)

Analysis Required

Lab. ID	Sample ID	Sampling Date	Matrix: Soil	Matrix: Water	Matrix: Sed	Preservation: Chilled	Preservation: HCl	Preservation: H2SO4	Preservation: Other	Containers: No. & Type	PFAS Suite 1	PFOS	Notes
	0861_MW030_240419	19/4/24		X				X		2 x 20mL	X		
	0861_MW309_240415	15/4/24		X				X		"	X		
	0861_MW031_240419	19/4/24		X				X		"	X		
	0861_MW032_240415	15/4/24		X				X		"	X		
	0861_MW033_240417	17/4/24		X				X		"	X		
	0861_MW034_240419	19/4/24		X				X		"	X		
	0861_MW035_240416	16/4/24		X				X		"	X		
	0861_MW036_240418	18/4/24		X				X		"	X		
	0861_MW037_240415	15/4/24		X				X		"	X		
	~~0861_MW041_2404~~			X				X			X		
	0861_MW042_240419	19/4/24		X				X		"	X		
	0861_MW043_240419	19/4/24		X				X		"	X		
	0861_MW044_240418	18/4/24		X				X		"	X		
	0861_MW046_240415	15/4/24		X				X		"	X		

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Report & Invoice: [redacted]

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Received by: Signed: Date: 24/4/24

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[redacted]

Email reports to: [redacted]

Laboratory Details

Lab Name:
Lab. Address:
Contact Name:
Lab Ref:

Tel:
Fax:
Preliminary Reports by:
Final Reports by:
Lab Quote No: SYD13014

Sampled By: AECOM

Mobile no.: [redacted]

Project Name: QLD_QRIU PFASOW-21

AECOM Project #: 60612563.3.1

Purchase Order No: 60612563.3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle) 24hr 48hr 5days Standard TAT	
2. Low LOR Quantitation Required?	
3. Is any soil material present in samples to be analysed from acrylic tubes?	
4. Is ice/excess material removed from samples to be reported as per NEPM 5.1.7?	
5. Special storage requirements/ details:	
6. Report Format: ESdat	Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix: Water	Preservation: Ice	Container No. & type	Analysis Request: PFAS in Aqueous (PFAS_AQ_LOW)	HOLD	Notes
	0861_MW047_240415	15/4/24	X		X	X		
	0861_MW048_240419	19/4/24	X		X	X		
	~~0861_MW049_2404~~		X		X	X		
	0861_MW050_240419	19/4/24	X		X	X		
	0861_MW055S_240416	16/4/24	X		X	X		
	0861_MW055D_240416	16/4/24	X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		
			X		X	X		

Comments: Please send ESdat files to DERP.labreports@aecom.com and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & Invoice: [redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

Relinquished by: [redacted] Signed: [redacted] Date: 24/4/24

Received by: Signed: Date:

AECOM

Chain of Custody

COC
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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Order No: SW13918

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: QLD 0861_PFASOMP_24
AECOM Project #: 60612563.3.1
Purchase Order No: 60612563.3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle) 24hr 48hr 5days Standard TAT	
2. Full TAT Guideline Required?	
3. Is this sediment layer project samples to be discussed from detections?	
4. Is asbestos material detected from samples to be reported as per NEPM 5.1.1?	
5. Special Known requirements? (details)	
6. Report format: ESdat	7. Project Manager: [redacted]

Lab. ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: Nitric	Preservation: Ice	Preservation: Ice	Preservation: none	Container No. & type	Analysis Request: 24 PFAS (PFAS Suite 24)	Analysis Request: +D.O	Analysis Request: Notes
	0861_SW002_240410	10/4/24		X			X			2 x 20mL	X		
	0861_SW003_240410	10/4/24		X			X			"	X		
	0861_SW004_240409	09/4/24		X			X			"	X		
	0861_SW005_240409	09/4/24		X			X			"	X		
	0861_SW008_240412	12/4/24		X			X			"	X		
	0861_SW009_240412	12/4/24		X			X			"	X		
	0861_SW011_240409	09/4/24		X			X			"	X		
	0861_SW015_240409			X			X			"	X		
	0861_SW016_240409			X			X			"	X		
	0861_SW018_240409			X			X			"	X		
	0861_SW020_240409			X			X			"	X		
	0861_SW021_240410	10/4/24		X			X			"	X		
	0861-SW025-240412	12/4/24		X			X			"	X		
	0861-SW026-240411	11/4/24		X			X			"	X		

Comments: Please send ESdat files to OERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & Invoice: [redacted]

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Received by: Signed: Date:

Relinquished by: Date: 24/4/24
Received by: Date:

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AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref.:

TAT:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SW[illegible]

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: OLD_0861 PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes/No
1. Urgent TAT required? (please circle: 24hr 48hr 5 day) Standard TAT	
2. Fast TAT Quotation Received?	
3. Is any additional lysis present in waters to be excluded from extractions?	
4. Is excessive matrix material received in samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details:)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Required:

Lab ID	Sample ID	Sample Date	Matrix: Water	Matrix: Soil	Preservation: Ice	Preservation: Other	Containers: No. & Type	ESDAT Y/N (PFAS Suite 25)	Notes
[illegible]	0861_SW027_2404[illegible]	09/4/24	X			X	2 x 20mL	X	
[illegible]	0861_SW028_2404[illegible]		X			X	"	X	
[illegible]	0861_SW030_2404[illegible]		X			X	"	X	
	~~0861_SW033_2404~~		X			X		X	
[illegible]2	0861_SW034_2404[illegible]	↓	X			X	"	X	
[illegible]	0861_SW036_2404[illegible]	11/4/24	X			X	"	X	
[illegible]	0861_SW037_2404[illegible]	10/4/24	X			X	"	X	
	~~0861_SW038_2404~~		X			X		X	
[illegible]	0861_SW041_2404[illegible]	12/4/24	X			X	"	X	
[illegible]2	0861_SW047_2404[illegible]	11/4/24	X			X	"	X	

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Report & invoice: [redacted]

Relinquished by: [redacted]
Signed: [redacted]
Date: 7/11/24

Received by: [redacted]
Signed: [redacted]
Date:

AECOM

Chain of Custody

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AECOM Australia Pty Ltd
[redacted]

Email reports to:
[redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref:

Tat:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote no: SY109215

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: QLD_0861_PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

1. Urgent TAT required (please circle): 24hr 48hr 5 days (Standard TAT)
2. Fast TAT (Surcharge Required)
3. Is any equipment/clothing present in samples to be excluded from interpretation?
4. Is asbestos material identified from samples to be reported as per NEPM 5.1?
5. Special storage requirements? Indicate
6. Report Format: ESdat

Suspected

Analysis Request

PFAS

Lab ID	Sample ID	Sampling Date	Matrix	Preservative	Container No & Type	PFAS
	~~0861_SW048_2404~~		W	X		X
	0861_SW049_2404 10	10/4/24	X	X	2 x 20mL	X
	0861_SW050_2404 11	11/4/24	X	X	"	X
	0861_SW051_2404 11	11/4/24	X	X	"	X
	0861_SW052_2404 10	10/4/24	X	X	"	X
	0861_SW053_2404 08	8/4/24	X	X	"	X
	0861_SW056_2404 09	09/4/24	X	X	"	X
	0861_SW059_2404 09	09/4/24	X	X	"	X
	0861_SW064_2404 12	12/4/24	X	X	"	X
	~~0861_SW067_2404~~		X	X		X
	0861_SW075_2404 09	09/4/24	X	X	"	X
	0861_SW079_2404 12	12/4/24	X	X	"	X
	0861_SW080_2404 12	12/4/24	X	X	"	X
	0861_SW088_2404 10	10/4/24	X	X	"	X

Comments: Please send e-Mail files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

Temp received: °C

Report & Invoice: [redacted]

Relinquished by: [redacted] Signed: Date: 24/4/24

Received by: Signed: Date:

AECOM

Chain of Custody

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AECOM Australia Pty Ltd
[redacted]

Email results to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Ph:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SW139719

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: CLC SW01 PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format.

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days) Standard TAT	
2. Field TAT Overview Required?	
3. Is any sediment layer present / waiting to be exposed from excavations?	
4. Is dewatering of material / groundwater / soil waste to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (please list)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: HCl	HNO3	ice	other	Container Type & Size	Analysis Required: PFAS suite (28)	Notes
[redacted]	0861_SW089_2404_10	10/4/24		X				X		2x 20mL	X	
	0861_SW090_2404_10	↓		X				X		"	X	
	0861_SW091_2404_10	↓		X				X		"	X	
	0861_SW094_2404_11	11/4/24		X				X		"	X	
	0861_SW099_2404_11	↓		X				X		"	X	
	0861_SW100_2404_11	↓		X				X		"	X	

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & invoice: [redacted]

Relinquished by: Signed: Date:

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Relinquished by: [redacted] Signed: Date: 2/4/24

Received by: [redacted] Signed: Date:

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[redacted]

Email (AECOM to):

[redacted]

Laboratory Details

Lab Name:
Lab Address:
Contact Name:
Lab Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SYD18419

Sampled By: AECOM

Mobile no.: [redacted]

Project Name: QLD_0861_PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes/No(s)
1. Urgent TAT required? (please circle) 24hr 48hr 5 days? Standard TAT	
2. Rush TAT (Surcharge Required)?	
3. Is Any requirement given present in waters to be excluded from calculations?	
4. Is laboratory matrix material removed from samples to be reported as per NEPM 5.1.3?	
5. Special storage requirements? (details	
6. Report format: ESdat 7. Project Manager: [redacted]	

Analysis Request

Lab ID	Sample ID	Sample Date	Matrix			Preservative				Container		Notes
			Soil	Water	Sed	HNO3	ICE	HCl	other	(per Analyte)	PFAS Suite by ELS/ALS	HOLD
	0861_SD002_240410	10/4/24			X			X		1x PFAS suite	X	
	0861_SD003_240410	9/4/24			X			X		"	X	
	0861_SD004_240409	09/4/24			X			X		"	X	
	0861_SD005_240409	09/4/24			X			X		"	X	
	0861_SD008_240412	12/4/24			X			X		"	X	
	0861_SD009_240412	12/4/24			X			X		"	X	
	0861_SD011_240409	09/4/24			X			X		"	X	
	0861_SD015_240409				X			X		"	X	
	0861_SD016_240409				X			X		"	X	
	0861_SD018_240409				X			X		"	X	
	0861_SD020_240409				X			X		"	X	
	0861_SD021_240410	10/4/24			X			X		"	X	

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Report & invoice: [redacted]

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Re: Signed: Date: 24/4/24

Re: Signed: [redacted] Date:

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[redacted]

Email reports to: [redacted]

Laboratory Details

Lab Name:
Lab Address:
Contact Name:
Lab Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY129119

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: OLD_SW1_PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT Required? (please circle 24hr 48hr 5 days) Standard TAT	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present? If yes, to be excluded from analysis?	
4. Is additional material removed from samples to be analysed as per NEPM S 1.1?	
5. Special storage requirements? (details)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Request

Lab. ID	Sample ID	Sample Date	Matrix	Preservative	Container	PFAS Suite 24 Extended	TOP	Notes
	0861_SD027_240409	9/4/24	X	X	1x PFAS plastic	X		
	0861_SD028_240409		X	X	"	X		
	0861_SD030_240409		X	X	"	X		
	0861_SD033_240409		X	X	"	X		
	0861_SD034_240409	↓	X	X	"	X		
	0861_SD036_240411	11/4/24	X	X	"	X		
	0861_SD037_240410	10/4/24	X	X	"	X		
	0861_SD038_240418	18/4/24	X	X	"	X		
	0861_SD041_240412	12/4/24	X	X	"	X		
	0861_SD047_240411	11/4/24	X	X	"	X		

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Report & invoice: [redacted]

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Relinquished by: [redacted] Signed: Date: 24/4/24

Received by: [redacted] Signed: Date:

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[redacted]

Email reports to:
[redacted]

Laboratory Details
Lab. Name:
Lab Address:
Contact Name:

Project Name: QLD_LSB1_PFASCWP 24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Sampled By: AECOM

Mobile no.: [redacted]

Specifications: Please report in ESdat format

1. Urgent TAT required? (please circle) 24hr 48hr 5 days Standard TAT
2. Low TAT Guarantee Required?
3. Is any sample suitable for possible leachate to be excluded from soil analysis?
4. Are samples requiring temperature blank to be received as per WEMP 5.1.3?
5. Special sample receipt notification?
6. Report Format: PDF
7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: Nitric	Amb.	Ice	other	Chemistry	PFAS QSM 5.3 Table B-15	NEPM
	0861_SD048_2404				X			X			X	
	0861_SD049_2404 10	10/4/24			X			X		1xPFASSC-1	X	
	0861_SD050_2404 11	11/4/24			X			X		"	X	
	0861_SD051_2404 11	11/4/24			X			X		"	X	
	0861_SD052_2404 10	10/4/24			X			X		"	X	
	0861_SD053_2404 12	12/4/24			X			X		"	X	
	0861_SD056_2404C 9	09/4/24			X			X		"	X	
	0861_SD059_2404D 9	09/4/24			X			X		"	X	
	0861_SD064_2404 12	12/4/24			X			X		"	X	
	0861_SD067_2404 12	12/4/24			X			X		"	X	
	0861_SD076_2404C 9	09/4/24			X			X		"	X	
	0861_SD079_2404 12	12/4/24			X			X		"	X	
	0861_SD080_2404 12	12/4/24			X			X		"	X	
	0861_SD088_2404 10	10/4/24			X			X		"	X	

Comments: Please send ESdat files to DERP.labreports@aecom.com and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & invoice: [redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

Signed: Date: 24/4/24

AECOM

Chain of Custody

COC
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AECOM Australia Pty Ltd
[redacted]

Email reports to:
[redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Mgr:
Tel:
Fax:
Preliminary Report by
Final Report by
Lab Quote No: SY122019

Sampled By: AECOM
Mobile no. [redacted]

Project Name: QLD_0861_PFASOMP 24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications. Please report in ESdat format

1. Urgent TAT required? (please circle: 24hr 48hr 5 days): Standard TAT
2. Fast TAT Surcharge Required?
3. Is any field and lab present or water? If confirmed from extractions?
4. Is hazardous material found in any samples to be reported as per NEPM 5.1.07
5. Special storage requirements/ Packages:
6. Report Format: ESdat
7. Project Manager: [redacted]

Yes (✓) / No

Analysis Request

Lab ID	Sample ID	Sampled Date	Matrix			Preservation				Container	EP231x_PFAS Suite	EP231x_PFAS Suite	None
			Soil	Water	Other	Ice	Unpres	Nitric	Sulfuric				
	Q861_SD085_2404 \O	10/4/24		X			X			1x PFAS soil jar	X		
	Q861_SD090_2404 \O			X			X			1x	X		
	Q861_SD091_2404 \O			X			X			1x	X		
	Q861_SD094_2404 \\	11/4/24		X			X			1x	X		
	Q861_SD099_2404 \\			X			X			1x	X		
	Q861_SD100_2404 \\			X			X			1x	X		

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Report & invoice: [redacted]

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Relinquished by: [redacted] Signed: Date: 24/4/24

Received by: Signed: Date:

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[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab Ref:
Telephone:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SW13919

Sampled By: AECOM
Mobile no. : 0426206362

Project Name: QLD_0661 PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days) Standard TAT	
2. Short TAT Guarantee Required?	
3. Is any Asbestos material present in samples to be submitted for analysis?	
4. Are Asbestos material removed from samples to be reported as per WA DOH?	
5. Special storage requirements? (please list)	
6. Report format: ESdat	7. Project Manager: [redacted]

Environmental Division
Brisbane
Work Order Reference
EB2413950

Telephone : +61-7-3243 7222

Lab ID	Sample ID	Sample Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: Sheet	Preservation: Ice	Preservation: HCl	Preservation: None	Container: No. & type	EP231X_PFAS Suite (X)	HOLD	Analysis Request
	0861_QC106_240415			X				X		2 x 20mL	X		
	0861_QC206_240415			X				X		"	X		Pls fwd to NMI
	0861_QC107_240416			X				X		"	X		
	0861_QC207_240416			X				X		"	X		Pls fwd to NMI
	0861_QC101_240409				X					Incorrect bottle			
	0861_QC201_240409				X					"			Pls fwd to NMI
	0861_QC102_240410				X					"			
	0861_QC202_240410				X					"			Pls fwd to NMI
	0861_QC103_240411				X					"			
	0861_QC203_240411				X					"			Pls fwd to NMI
	0861_QC104_240412				X					"			
	0861_QC204_240412				X					"			Pls fwd to NMI
	0861_QC105_240412				X					"			
	0861_QC205_240412				X					"			Pls fwd to NMI

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Report & invoice [redacted]

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Relinquished by: [redacted] Signed: Date: 24/4/24

Received by: [redacted] Signed: Date:

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AECOM Australia Pty Ltd

[redacted]

Email results to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref.

Tel:
Fax:
Preliminary Reports by:
Final reports by:
Lab Quote No: SY115010

Sampled By: AECOM
Mobile no. [redacted]

Project Name: QLD_0661_PFASOMP_24

AECOM Project #: 60612583.3.1

Purchase Order No: 60612583.3.1

Specifications: Please report in EDas format

1. Urgent TAT required? Please circle: 24hr 48hr 5 days! Standard TAT

2. Est. TAT if known Required?

3. Is any sample/s over present Limits to be excluded from reporting?

4. Environmental Media/Matrix removed from samples to be reported as per NEPM 1999

5. Special storage requirements/ Hazards:

6. Report Format: ESdat

7. Project Mgr to: [redacted]

Yes (tick)

Analysis Required

Lab ID	Sample ID	Sampling Date	Matrix: Water	Matrix: Soil	Preservation: Ice	Preservation: Other	Container / Preservative	C22_IPFAS_SW_20	VOC	Notes
	0861_QC100_240107		X			X	2 x 20 mL	X		
	0861_QC200_240409		X			X	2 x 20 mL	X		
	0861_QC100_240409			X	X	X	1 x PFAS bottle	X		pls fwd to NMI
	0861_QC200_240409			X	X	X	1 x PFAS bottle	X		pls fwd to NMI
	0861_QC101_240409		X				2 x 20 mL			pls fwd to NMI
	0861_QC201_240409		X							pls fwd to NMI
	0861_QC102_240410		X							pls fwd to NMI
	0861_QC202_240410		X							pls fwd to NMI
	0861_QC103_240411		X							pls fwd to NMI
	0861_QC203_240411		X							pls fwd to NMI
	0861_QC104_240412		X							pls fwd to NMI
	0861_QC204_240412		X							pls fwd to NMI
	0861_QC105_240412		X							pls fwd to NMI
	0861_QC205_240412		X							pls fwd to NMI

Comments: Please send EDas files to [redacted] and ensure that the files use the PROJECT NAME

Temp. Blank (°C):

Report & Invoice: [redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

Relinquished by: [redacted] Date: 24/4/24

Received by: [redacted] Date:

AECOM

Chain of Custody

COC
Page of

AECOM Australia Pty Ltd
[redacted]

Email report to:
[redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab Ref:

Tat:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No:

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: OLD_0661 PFASOMP 24
AECOM Project #: 60612563 3.1
Purchase Order No: 60612563 3.1

Specifications. Please report in ESdat format

Standard TAT

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Field QA/QC Samples Required?	
3. Is any sediment and / or pesticide in waters to be analysed from this event?	
4. Are any samples received for analysis to be disposed of as per NEPM B1 & C1?	
5. Special storage requirements? Details:	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Request

PFAS 28 [PFAS_AECOM]

PFOS

Note:

Lab ID	Sample ID	Sampling Date	Matrix: W	Matrix: SW	Matrix: Sed	Preservative: Nitric	Preservative: Ice	Preservative: Chill	Preservative: Frozen	Container (No & type)	PFAS 28	PFOS
	0661_QC105_240416	16/4/24		X				X		2 x 250mL	X	
	0661_QC106_240417	17/4/24		X				X		"	X	
	0661_QC104_240418	18/4/24		X				X		"	X	
	0661_QC107_240419	19/4/24		X				X		"	X	

Comments: Please send ESdat files to DERP.labreports@aecom.com and ensure that the files use the PROJECT NAME

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Report & Invoice: [redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

[redacted] Date: 24/4/24

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[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref.

Ph:
Fax:
Preliminary Report by
Final Report by
Lab Quote No: SY/135/19

Sampled By: AECOM

Mobile no.: [redacted]

Project Name: SMZ_DRP_PFASOMP_24

AECOM Project #: 60612563.3.1

Purchase Order No: 60612563.3.1

Specifications: Please report in ESdat format

1. Urgent TAT required? (please circle) 24hr 48hr 5 days etc. Standard TAT
2. Rush TAT Guarantee Received:
3. Is this solution or layer present & wishes to be excluded from interpretation?
4. Is it assumed as Trade Waste/Waste to be reported as per NEPM s 1.17
5. Special storage requirements/ details:
6. Report Format: ESdat
7. Project Manager: [redacted]

Key (optional)

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix		Preservation				Container	PFAS (EPA Suite 28)	TOC
			Soil	Water	Ice	Ice					
	0861_QC300_240409	9/4/24		X			X		1 x 125mL	X	
	0861_QC301_240410	10/4/24		X			X		"	X	
	0861_QC302_240411	11/4/24		X			X		"	X	
	0861_QC303_240412	12/4/24		X			X		"	X	
	0861_QC304_240415	15/4/24		X			X		"	X	
	0861_QC305_240416	16/4/24		X			X		"	X	
	0861_QC306_240417	17/4/24		X			X		"	X	
	0861_QC307_240418	18/4/24		X			X		"	X	
	0861_QC308_240419	19/4/24		X			X		"	X	
	0861_QC400_240409	9/4/24		X			X		2 x 20mL	X	
	0861_QC401_240410	10/4/24		X			X		"	X	
	0861_QC402_240411	11/4/24		X			X		"	X	
	0861_QC403_240412	12/4/24		X			X		"	X	
	0861_QC404_240415	15/4/24		X			X		"	X	

Environmental Division
Brisbane
Work Order Reference
EB2413951

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & invoice [redacted]

Relinquished by: [redacted]

Received by: [redacted]

Date: 24/4/24

Relinquished by: Signed: Date:

Received by: Signed: Date:

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COC Page 1 of 1

AECOM Australia Pty Ltd
[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name: ALS
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY115615

Sampled By: AECOM
Mobile no.: [redacted]

Project Name: QLD_0861 PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Request

Lab ID	Sample ID	Sampling Date	Matrix: Water	Matrix: Soil	Matrix: Other	Preservation: Ice	Preservation: Type	Preservation: Acid	Preservation: Other	Container: No. & Type	EP231X (PFAS 500 28)	HOLD	None
	0861_MW041_240503	3/05/2024		X				X		2-P	X		
	0861_MW025_240503	3/05/2024		X				X		2-P	X		
	0861_Tripblank_240503	3/05/2024		X				X		2-P	X		
	0861_Rinsate_240503	3/05/2024		X				X		2-P	X		

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Report & Invoice: [redacted]

Relinquished by	Signed	Date	Relinquished by	Signed	Date
[redacted]	[redacted]	2/5/24			
Received by	Signed	Date: 3/5/24	Received by	Signed	Date
		1654			

Environmental Division
Brisbane
Work Order Reference
EB2414902

[redacted]

AECOM

Chain of Custody

CoC Page 1 of 1

[redacted]

Email reports to: [redacted]

Laboratory Details

Lab. Name:
Lab. Address:
Contact Name
Lab. Ref.

Tel
Fax
Preliminary Report by
Final Report by
Lab Quote No SY[illegible]19

Sampled By: AECOM **Project Name:** QLD_0561_PFASOMP_24 **AECOM Project #:** 60612563 3.1 **Purchase Order No:** 60612563 3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extraction?	
4. % coarse/course material removed from samples to be reported as per NEPM 3.1 cl 3	
5. Special storage requirements? (details _____)	
6. Report Format: ESdat 7. Project Manager [redacted]	

Analysis Request

Lab. ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: filtered	Preservation: unfilt	Preservation: ice	Preservation: other	Containers (No & type)	EP231X(PFAS Std 28)	HOLD	Notes
1	0861_MW057S_240503	3/05/2024		X				X		2 P	X		
2	0861_MW057I_240503	3/05/2024		X				X		[redacted]			

Comments: Please send ESdat Files to EDERP.labreports@esdat.com.au and ensure that [illegible] NAME

Temp. received: °C

Report & Invoice [redacted]

Relinquished by	[redacted]	Signed:		Date: 3/5/24	Relinquished by	Signed:	Date:
Received by:		Signed:	[redacted]	Date: 3/5/24 1634	Received by:	Signed:	Date:

Environmental Division
Brisbane
Work Order Reference
EB2414909

[redacted]

SGK25002985

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[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY/ 3x19

Sampled By: AECOM
Mobile no. : [redacted]

Project Name: QLD_0861_PFASOMP_24
AECOM Project #: 60612563 3.1
Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days) Standard TAT	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extraction?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1.17	
5. Special storage requirements? (details):	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Request

AEL006/24042 1/1 Am
DUE: 9/5/24
Notes
30 APR 2024 11:00
AO
C
30 APR 2024 11:14

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	sed	Preservation: filtered	acid	ice	other	Container (No. & type)	EP233/PFAS Suite 28	HOLD	
1	0861-QC106-240415			X				X		2 x 20mL	X		
/	0861-QC206-240415			X				X		"	X	N24/009271	Pls fwd to NMI
2	0861-QC107-240416			X				X		"	X		
/	0861-QC207-240416			X				X		"	X	N24/009272	Pls fwd to NMI
3	0861-QC101-240409				X					1x PFAS soil jar			
/	0861-QC201-240409				X					"		N24/009273	Pls fwd to NMI
4	0861-QC102-240410				X					"			
/	0861-QC202-240410				X					"		N24/009274	Pls fwd to NMI
5	0861-QC103-240411				X					"			
/	0861-QC203-240411				X					"		N24/009275	Pls fwd to NMI
6	0861-QC104-240412				X					"			
/	0861-QC204-240412				X					"		N24/009276	Pls fwd to NMI
9	0861-QC105-240412				X					"			
/	0861-QC205-240412				X					"		N24/009277	Pls fwd to NMI

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the file use the PROJECT NAME

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Report & invoice: [redacted]

Lab Report/Delivery ID

Relinquished by:
Signed:
Date:

Received by:
Signed
Date:

Relinquished by: [redacted]
Signed: [redacted]
Date: 24/4/24

Received by:
Signed:
Date:

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[redacted]

Email reports to: [redacted]

Laboratory Details
Lab Name:
Lab Address:
Contact Name:
Lab. Ref:

Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: SY-139419

Sampled By: AECOM
Mobile no. : 0428206352

Project Name: QLD_0861_PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days) Standard TAT	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details:)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Analysis Request

20 SEP 2024 11:44

30 SEP 2024 11:44

Lab ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: unpres	Preservation: acid	Preservation: ice	Preservation: other	Container (No. & type)	EP231x (PFAS Std 28)	HOLD	
8	0861_QC100_240409			X				X		2x 20 mL	X		
	0861_QC200_240409			X				X		2x 20 mL	X		N24/009278 pls fwd to NMI
9	0861_QC100_240409				X			X		1x PFAS 8.1g/40	X		
	0861_QC200_240409				X			X		1x PFAS 8.1g/40	X		N24/009279 pls fwd to NMI
10	0861_QC101_240409			X						2x 20 mL			
	0861_QC201_240409			X						"			N24/009280 pls fwd to NMI
11	0861_QC102_240410			X						"			
	0861_QC202_240410			X						"			N24/009281 pls fwd to NMI
12	0861_QC103_240411			X						"			
	0861_QC203_240411			X						"			N24/009282 pls fwd to NMI
13	0861_QC104_240412			X						"			
	0861_QC204_240412			X						"			N24/009283 pls fwd to NMI
14	0861_QC105_240412			X						"			
	0861_QC205_240412			X						"			N24/009284 pls fwd to NMI

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

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Report & invoice: [redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

Relinquished by: [redacted] Sig: Date: 20/9/24

Received by: [redacted] Sig: Date:

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Page of

AECOM Australia Pty Ltd
[redacted]

Email reports to:
[redacted]

Laboratory Details
Lab. Name
Lab. Address
Contact Name
Lab Ref

Tel:
Fax:
Preliminary Report by
Final Report by
Lab Quote No SY/138/10

Sampled By: AECOM
Mobile no [redacted]

Project Name: QLD_0861_PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

Standard TAT

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. Is additional material required from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? details:	
6. Report Format: ESdat	
7. Project Manager: [redacted]	

Analysis Request

Notes: 30 APR 2024 11:44

Lab ID	Sample ID	Sampling Date	Matrix: soil	water	veg	Preservation: Ice	Container (No. & type)	@ 21°C (PFAS Std 28)	HOLD	
15	0861_QC405_240416	16/4/24		X		X	2 x 20mL	X		30 APR 2024 11:44
16	0861_QC406_240417	17/4/24		X		X	"	X		
17	0861_QC407_240418	18/4/24		X		X	"	X		
18	0861_QC408_240419	19/4/24		X		X	"	X		
1	0861-QC208-240417			W						N24/009286
1	0861-QC209-240418			W						N24/009286

} Extra Samples to 5d4

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & Invoi[redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

Relinquished by: [redacted] Signed: [redacted] Date: 24/4/24

Received by: Signed: Date:

AECOM

Chain of Custody

COC Page 30 APR 2024 11:44 of

AECOM Australia Pty Ltd [redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:

Tel:
Fax:
Preliminary Report by: 30 APR 2024 11:44
Final Report by:
Lab Quote No. QW35019

1881189-PFAS

FORWARD TO NMI

EB2413950 - 020AA-020AB
022AA-022AB

Sampled By: AECOM

Project Name: QLD_5861_PFASO

Purchase Order No. 60612583.3.1

Mobile no. [redacted]

Specifications: Please report in ESdat format

1. Urgent TAT required? (please circle: 24hr 48hr 5 days) Standard TAT
2. Fast TAT Guarantee Required?
3. Is any sediment type present in waters to be excluded from extraction?
4. % extraneous material removed from samples to be reported as per NEPM S.3.1?
5. Special storage requirements? (details:)

6. Report Format: ESdat

7. Project Manager [redacted]

Analysis Requested

Environmental Division Brisbane
Work Order Reference
EB2413950

Lab. ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: sed	Preservation: filtered	Preservation: acid	Preservation: ice	Preservation: other	Container (No. & type)	EP231X (PFAS)	EP230 (PFAS)	
1	0861_QC106_240415			X				X		2x20mL	X		
	0861_QC206_240415			X				X		"	X		Pls fwd to NMI
2	0861_QC107_240416			X				X		"	X		
	0861_QC207_240416			X				X		"	X		Pls fwd to NMI
3	0861_QC101_240409				X					1xPFAS soil jar			
	0861_QC201_240409				X					"			Pls fwd to NMI
4	0861_QC102_240410				X					"			
	0861_QC202_240410				X					"			Pls fwd to NMI
5	0861_QC103_240411				X					"			
	0861_QC203_240411				X					"			Pls fwd to NMI
6	0861_QC104_240412				X					"			
	0861_QC204_240412				X					"			Pls fwd to NMI
7	0861_QC105_240412				X					"			
	0861_QC205_240412				X					"			Pls fwd to NMI

Comments: Please send ESdat files to DERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & invoice: [redacted]

Relinquished by: TD 29/4

Signed: Date:

Received by: Signed: Date:

Relinquished by: [redacted] Signed: Date: 29/4/24

Received by: Signed: Date:

AECOM

Chain of Custody

COC Page of

AECOM Australia Pty Ltd

[redacted]

Email reports to: [redacted]

Laboratory Details
Lab. Name:
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by
Final Report by
Lab Quote No: 571139[illegible]

Sampled By: AECOM
Mobile no. [redacted]

Project Name: QLD_0861_PFASOMP_24

AECOM Project #: 60612563 3.1

Purchase Order No: 60612563 3.1

Specifications: Please report in ESdat format

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr 5 days) Standard TAT	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from investigation?	
4. % cobbleous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details:)	
6. Report Format: ESdat	7. Project Manager: [redacted]

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	wet	Preservation: filtered	acid	ice	other	Container (No. & type)	Analysis Request: PFAS (incl 28)	QLD	Notes
8	0861_QC100_240409			X				X		2x 20 mL	X		
	0861_QC200_240409			X				X		2x 20 mL	X		
9	0861_QC100_240409				X			X		1x PFAS soil jar	X		pls fwd to NMI
	0861_QC200_240409				X			X		1x PFAS soil jar	X		pls fwd to NMI
10	0861_QC101_240409			X						2x 20mL			pls fwd to NMI
	0861_QC201_240409			X						"			
11	0861_QC102_240410			X						"			pls fwd to NMI
	0861_QC202_240410			X						"			
12	0861_QC103_240411			X						"			pls fwd to NMI
	0861_QC203_240411			X						"			
13	0861_QC104_240412			X						"			pls fwd to NMI
	0861_QC204_240412			X						"			
14	0861_QC105_240412			X						"			pls fwd to NMI
	0861_QC205_240412			X						"			pls fwd to NMI

Comments: Please send ESdat files to OERP.labreports@esdat.com.au and ensure that the files use the PROJECT NAME

Temp. received: °C

Report & invoice [redacted]

Relinquished by: Signed: Date:

Received by: Signed: Date:

Relinquished by: [redacted] Signed: [redacted] Date: 24/4/24

Received by: Signed: Date:

Appendix E

Laboratory Analytical Certificates and QA / QC Reports

Appendix E Laboratory Analytical Certificates and QA / QC Reports

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EB2413910**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 6
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 24-Apr-2024 17:13	Issue Date	: 29-Apr-2024
Client Requested Due Date	: 09-May-2024	Scheduled Reporting Date	: **09-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 5	Temperature	: 6.5/7.0/5.1°C - Ice present
Receipt Detail	: MEDIUM ESKY	No. of samples received / analysed	: 109 / 109

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
- ***SRN Reissued 29/04/2024: As per the email from [redacted] on 29/04/2024 this workorder has been amended to add 'missing' sample #014. Sample has been added as EB2413910-112 and EP231X analysis added per request.***
- **Please be advised, no containers were received for sample "0861_MW309_240415" (ALS #14) and has been removed from this workorder. For further information regarding this adjustment, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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)
EB2413910-071	10-Apr-2024 00:00	0861_SD002_240410	✓	✓
EB2413910-072	10-Apr-2024 00:00	0861_SD003_240410	✓	✓
EB2413910-073	09-Apr-2024 00:00	0861_SD004_240409	✓	✓
EB2413910-074	09-Apr-2024 00:00	0861_SD005_240409	✓	✓
EB2413910-075	12-Apr-2024 00:00	0861_SD008_240412	✓	✓
EB2413910-076	12-Apr-2024 00:00	0861_SD009_240412	✓	✓
EB2413910-077	09-Apr-2024 00:00	0861_SD011_240409	✓	✓
EB2413910-078	09-Apr-2024 00:00	0861_SD015_240409	✓	✓
EB2413910-079	09-Apr-2024 00:00	0861_SD016_240409	✓	✓
EB2413910-080	09-Apr-2024 00:00	0861_SD018_240409	✓	✓
EB2413910-081	09-Apr-2024 00:00	0861_SD020_240409	✓	✓
EB2413910-082	10-Apr-2024 00:00	0861_SD021_240410	✓	✓
EB2413910-083	09-Apr-2024 00:00	0861_SD027_240409	✓	✓
EB2413910-084	09-Apr-2024 00:00	0861_SD028_240409	✓	✓
EB2413910-085	09-Apr-2024 00:00	0861_SD030_240409	✓	✓
EB2413910-086	09-Apr-2024 00:00	0861_SD033_240409	✓	✓
EB2413910-087	09-Apr-2024 00:00	0861_SD034_240409	✓	✓
EB2413910-088	11-Apr-2024 00:00	0861_SD036_240411	✓	✓
EB2413910-089	10-Apr-2024 00:00	0861_SD037_240410	✓	✓
EB2413910-090	18-Apr-2024 00:00	0861_SD038_240418	✓	✓
EB2413910-091	12-Apr-2024 00:00	0861_SD041_240412	✓	✓
EB2413910-092	11-Apr-2024 00:00	0861_SD047_240411	✓	✓
EB2413910-093	10-Apr-2024 00:00	0861_SD049_240410	✓	✓
EB2413910-094	11-Apr-2024 00:00	0861_SD050_240411	✓	✓
EB2413910-095	11-Apr-2024 00:00	0861_SD051_240411	✓	✓
EB2413910-096	10-Apr-2024 00:00	0861_SD052_240410	✓	✓
EB2413910-097	18-Apr-2024 00:00	0861_SD053_240418	✓	✓
EB2413910-098	09-Apr-2024 00:00	0861_SD056_240409	✓	✓
EB2413910-099	09-Apr-2024 00:00	0861_SD059_240409	✓	✓
EB2413910-100	18-Apr-2024 00:00	0861_SD064_24048	✓	✓
EB2413910-101	18-Apr-2024 00:00	0861_SD067_240418	✓	✓
EB2413910-102	09-Apr-2024 00:00	0861_SD076_240409	✓	✓
EB2413910-103	18-Apr-2024 00:00	0861_SD079_240418	✓	✓
EB2413910-104	18-Apr-2024 00:00	0861_SD080_240418	✓	✓
EB2413910-105	10-Apr-2024 00:00	0861_SD088_240410	✓	✓

			SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
EB2413910-106	10-Apr-2024 00:00	0861_SD089_240410	✓	✓
EB2413910-107	10-Apr-2024 00:00	0861_SD090_240410	✓	✓
EB2413910-108	10-Apr-2024 00:00	0861_SD091_240410	✓	✓
EB2413910-109	11-Apr-2024 00:00	0861_SD094_240411	✓	✓
EB2413910-110	11-Apr-2024 00:00	0861_SD099_240411	✓	✓
EB2413910-111	11-Apr-2024 00:00	0861_SD100_240411	✓	✓

Matrix: **WATER**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	WATER - EP231X PFAS - Full Suite (30 analytes)
EB2413910-001	19-Apr-2024 00:00	0861_MW002_240419	✓
EB2413910-002	15-Apr-2024 00:00	0861_MW005_240415	✓
EB2413910-003	18-Apr-2024 00:00	0861_MW006_240418	✓
EB2413910-004	18-Apr-2024 00:00	0861_MW007_240418	✓
EB2413910-005	15-Apr-2024 00:00	0861_MW012_240415	✓
EB2413910-006	15-Apr-2024 00:00	0861_MW020_240415	✓
EB2413910-007	19-Apr-2024 00:00	0861_MW022_240419	✓
EB2413910-008	18-Apr-2024 00:00	0861_MW023_240418	✓
EB2413910-009	16-Apr-2024 00:00	0861_MW024_240416	✓
EB2413910-010	15-Apr-2024 00:00	0861_MW026_240415	✓
EB2413910-011	18-Apr-2024 00:00	0861_MW028_240418	✓
EB2413910-012	18-Apr-2024 00:00	0861_MW029_240418	✓
EB2413910-013	19-Apr-2024 00:00	0861_MW030_240419	✓
EB2413910-015	19-Apr-2024 00:00	0861_MW031_240419	✓
EB2413910-016	15-Apr-2024 00:00	0861_MW032_240415	✓
EB2413910-017	17-Apr-2024 00:00	0861_MW033_240417	✓
EB2413910-018	19-Apr-2024 00:00	0861_MW034_240419	✓
EB2413910-019	16-Apr-2024 00:00	0861_MW035_240416	✓
EB2413910-020	18-Apr-2024 00:00	0861_MW036_240418	✓
EB2413910-021	15-Apr-2024 00:00	0861_MW037_240415	✓
EB2413910-022	19-Apr-2024 00:00	0861_MW042_240419	✓
EB2413910-023	19-Apr-2024 00:00	0861_MW043_240419	✓
EB2413910-024	18-Apr-2024 00:00	0861_MW044_240418	✓

			WATER - EP231X PFAS - Full Suite (30 analytes)
EB2413910-025	15-Apr-2024 00:00	0861_MW046_240415	✓
EB2413910-026	15-Apr-2024 00:00	0861_MW047_240415	✓
EB2413910-027	19-Apr-2024 00:00	0861_MW048_240419	✓
EB2413910-028	19-Apr-2024 00:00	0861_MW050_240419	✓
EB2413910-029	16-Apr-2024 00:00	0861_MW055S_240416	✓
EB2413910-030	16-Apr-2024 00:00	0861_MW055D_240416	✓
EB2413910-031	10-Apr-2024 00:00	0861_SW002_240410	✓
EB2413910-032	10-Apr-2024 00:00	0861_SW003_240410	✓
EB2413910-033	09-Apr-2024 00:00	0861_SW004_240409	✓
EB2413910-034	09-Apr-2024 00:00	0861_SW005_240409	✓
EB2413910-035	12-Apr-2024 00:00	0861_SW008_240412	✓
EB2413910-036	12-Apr-2024 00:00	0861_SW009_240412	✓
EB2413910-037	09-Apr-2024 00:00	0861_SW011_240409	✓
EB2413910-038	09-Apr-2024 00:00	0861_SW015_240409	✓
EB2413910-039	09-Apr-2024 00:00	0861_SW016_240409	✓
EB2413910-040	09-Apr-2024 00:00	0861_SW018_240409	✓
EB2413910-041	09-Apr-2024 00:00	0861_SW020_240409	✓
EB2413910-042	10-Apr-2024 00:00	0861_SW021_240410	✓
EB2413910-045	09-Apr-2024 00:00	0861_SW027_240409	✓
EB2413910-046	09-Apr-2024 00:00	0861_SW028_240409	✓
EB2413910-047	09-Apr-2024 00:00	0861_SW030_240409	✓
EB2413910-048	09-Apr-2024 00:00	0861_SW034_240409	✓
EB2413910-049	11-Apr-2024 00:00	0861_SW036_240411	✓
EB2413910-050	10-Apr-2024 00:00	0861_SW037_240410	✓
EB2413910-051	12-Apr-2024 00:00	0861_SW041_240412	✓
EB2413910-052	11-Apr-2024 00:00	0861_SW047_240411	✓
EB2413910-053	10-Apr-2024 00:00	0861_SW049_240410	✓
EB2413910-054	11-Apr-2024 00:00	0861_SW050_240411	✓
EB2413910-055	11-Apr-2024 00:00	0861_SW051_240411	✓
EB2413910-056	10-Apr-2024 00:00	0861_SW052_240410	✓
EB2413910-057	18-Apr-2024 00:00	0861_SW053_240418	✓
EB2413910-058	09-Apr-2024 00:00	0861_SW056_240409	✓
EB2413910-059	09-Apr-2024 00:00	0861_SW059_240409	✓
EB2413910-060	18-Apr-2024 00:00	0861_SW064_240418	✓
EB2413910-061	09-Apr-2024 00:00	0861_SW076_240409	✓
EB2413910-062	18-Apr-2024 00:00	0861_SW079_240418	✓
EB2413910-063	18-Apr-2024 00:00	0861_SW080_240418	✓
EB2413910-064	10-Apr-2024 00:00	0861_SW088_240410	✓
EB2413910-065	10-Apr-2024 00:00	0861_SW089_240410	✓
EB2413910-066	10-Apr-2024 00:00	0861_SW090_240410	✓
EB2413910-067	10-Apr-2024 00:00	0861_SW091_240410	✓

			WATER - EP231X PFAS - Full Suite (30 analytes)
EB2413910-068	11-Apr-2024 00:00	0861_SW094_240411	✓
EB2413910-069	11-Apr-2024 00:00	0861_SW099_240411	✓
EB2413910-070	11-Apr-2024 00:00	0861_SW100_240411	✓
EB2413910-112	24-Apr-2024 00:00	0861_MW309_240415	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
				Date	Evaluation	Date	Evaluation
EA055: Moisture Content							
0861_SD004_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD005_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD011_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD015_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD016_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD018_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD020_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD027_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD028_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD030_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD033_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD034_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD056_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD059_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----
0861_SD076_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	×	----	----

Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- A4 - AU Tax Invoice (INV) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
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DERP ESDAT REPORTS

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[redacted]

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[redacted]

CERTIFICATE OF ANALYSIS

Work Order	: **EB2413910**	Page	: 1 of 49
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024 17:13
Order number	: 60612563 3.1	Date Analysis Commenced	: 26-Apr-2024
C-O-C number	: ----	Issue Date	: 14-May-2024 15:52
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 109		
No. of samples analysed	: 108		

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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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 PFAS: Particular samples required dilution prior to extraction due to the presence of high level contaminants. LOR values have been adjusted accordingly.
- EP231X PFAS: The LOR values of particular analytes have been raised for particular samples due to matrix interferences.
- EP231X PFAS: Sample "0861_SD018_240409"(EB2413910-080) shows poor duplicate recovery due to sample heterogeneity. Confirmed by visual inspection.
- 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 tables in USEPA 1633 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.
- 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	0861_SD002_240410	0861_SD003_240410	0861_SD004_240409	0861_SD005_240409	0861_SD008_240412
				Sampling date / time	10-Apr-2024 00:00	10-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	12-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-071	EB2413910-072	EB2413910-073	EB2413910-074	EB2413910-075
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**47.0**	**32.4**	**38.2**	**39.6**	**42.8**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0003
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	**0.0003**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0008**	<0.0002	**0.0006**	**0.0002**	**0.0024**
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		**0.0090**	**0.0013**	**0.0283**	**0.0029**	**0.0276**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	<0.0012	<0.0002	**0.0053**
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	**0.0006**	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0005**	<0.0002	**0.0005**	<0.0002	**0.0006**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0004**	<0.0002	**0.0005**	**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	**0.0005**
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		**0.0002**	<0.0002	<0.0002	<0.0002	**0.0004**
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	**0.0007**
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	**0.0009**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD002_240410	0861_SD003_240410	0861_SD004_240409	0861_SD005_240409	0861_SD008_240412
				Sampling date / time	10-Apr-2024 00:00	10-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	12-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-071	EB2413910-072	EB2413910-073	EB2413910-074	EB2413910-075
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.0117**	**0.0013**	**0.0305**	**0.0033**	**0.0390**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0098**	**0.0013**	**0.0289**	**0.0031**	**0.0300**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0113**	**0.0013**	**0.0305**	**0.0033**	**0.0309**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**100**	**134**	**108**	**100**	**103**
13C8-PFOA	----	0.0002	%		**110**	**114**	**110**	**98.5**	**97.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD009_240412	0861_SD011_240409	0861_SD015_240409	0861_SD016_240409	0861_SD018_240409
				Sampling date / time	12-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-076	EB2413910-077	EB2413910-078	EB2413910-079	EB2413910-080
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**34.6**	**60.8**	**44.4**	**60.0**	**33.8**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0003	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	**0.0003**	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0003**	**0.0038**	<0.0002	<0.0002	**0.0002**
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		**0.0061**	**0.0369**	**0.0062**	<0.0024	**0.0034**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0007	<0.0002	<0.0252	<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	**0.0009**	<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		<0.0002	**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	**0.0003**	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD009_240412	0861_SD011_240409	0861_SD015_240409	0861_SD016_240409	0861_SD018_240409
				Sampling date / time	12-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-076	EB2413910-077	EB2413910-078	EB2413910-079	EB2413910-080
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.0064**	**0.0426**	**0.0062**	<0.0002	**0.0036**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0064**	**0.0407**	**0.0062**	<0.0002	**0.0036**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0064**	**0.0420**	**0.0062**	<0.0002	**0.0036**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**112**	**102**	**117**	**106**	**120**
13C8-PFOA	----	0.0002	%		**118**	**91.0**	**95.5**	**121**	**115**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD020_240409	0861_SD021_240410	0861_SD027_240409	0861_SD028_240409	0861_SD030_240409
				Sampling date / time	09-Apr-2024 00:00	10-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-081	EB2413910-082	EB2413910-083	EB2413910-084	EB2413910-085
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**41.4**	**35.9**	**45.5**	**47.4**	**71.1**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	**0.0011**	**0.0005**	<0.0002	**0.0011**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0002**	**0.0136**	**0.0049**	**0.0008**	**0.0128**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0020	<0.0008	<0.0002	<0.0014
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0041**	**0.303**	**0.0422**	**0.0150**	**0.176**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	**0.0134**	<0.0002	<0.0002	<0.0005
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.005	<0.001	<0.001	<0.002
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	**0.0018**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	**0.0016**	**0.0006**	<0.0002	**0.0030**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	**0.0014**
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	**0.0028**	<0.0002	<0.0002	**0.0017**
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	**0.0005**
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	**0.0013**
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	**0.0022**
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0010	**0.0004**	<0.0002	**0.0030**
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0025	<0.0006	<0.0005	<0.0012
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	**0.0040**	<0.0002	<0.0002	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD020_240409	0861_SD021_240410	0861_SD027_240409	0861_SD028_240409	0861_SD030_240409
				Sampling date / time	09-Apr-2024 00:00	10-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-081	EB2413910-082	EB2413910-083	EB2413910-084	EB2413910-085
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0025	<0.0006	<0.0005	<0.0012
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0025	<0.0006	<0.0005	<0.0012
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0025	<0.0006	<0.0005	<0.0012
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0025	<0.0006	<0.0005	<0.0012
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0002	<0.0005
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0010	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0010	<0.0005	<0.0005	**0.0014**
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0010	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0010	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		**0.0043**	**0.340**	**0.0486**	**0.0158**	**0.206**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0043**	**0.317**	**0.0471**	**0.0158**	**0.189**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0043**	**0.321**	**0.0477**	**0.0158**	**0.198**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**108**	**Not Determined**	**102**	**116**	**102**
13C8-PFOA	----	0.0002	%		**97.5**	**Not Determined**	**90.0**	**118**	**85.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD033_240409	0861_SD034_240409	0861_SD036_240411	0861_SD037_240410	0861_SD038_240418
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	11-Apr-2024 00:00	10-Apr-2024 00:00	18-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-086	EB2413910-087	EB2413910-088	EB2413910-089	EB2413910-090
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**41.5**	**47.2**	**38.9**	**85.6**	**45.4**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		**0.0025**	<0.0002	**0.0060**	**0.0025**	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		**0.0030**	<0.0002	<0.0002	**0.0029**	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0273**	<0.0002	<0.0002	**0.0262**	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0024	<0.0002	<0.0002	<0.0034	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.305**	<0.0026	<0.0018	**0.313**	<0.0016
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.257**	<0.0002	<0.0002	**0.0046**	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.002	<0.001	<0.001	<0.002	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		**0.0023**	<0.0002	<0.0002	**0.0017**	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0105**	<0.0002	<0.0002	**0.0046**	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		**0.0034**	<0.0002	<0.0002	**0.0010**	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0087**	<0.0002	<0.0002	**0.0020**	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		**0.0016**	<0.0002	<0.0002	<0.0005	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		**0.0038**	<0.0002	<0.0002	**0.0018**	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		**0.0344**	<0.0002	<0.0002	**0.0013**	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		**0.177**	<0.0002	<0.0002	**0.0013**	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		**0.110**	<0.0002	<0.0002	<0.0005	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		**0.0622**	<0.0005	<0.0005	<0.0013	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		**0.0289**	<0.0002	<0.0002	<0.0005	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD033_240409	0861_SD034_240409	0861_SD036_240411	0861_SD037_240410	0861_SD038_240418
			Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	11-Apr-2024 00:00	10-Apr-2024 00:00	18-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	EB2413910-086	EB2413910-087	EB2413910-088	EB2413910-089	EB2413910-090
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0012	<0.0005	<0.0005	<0.0013	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0012	<0.0005	<0.0005	<0.0013	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0012	<0.0005	<0.0005	<0.0013	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0012	<0.0005	<0.0005	<0.0013	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0005	<0.0002	<0.0002	<0.0005	<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	**0.0138**	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	**0.0843**	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**1.14**	<0.0002	**0.0060**	**0.363**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.332**	<0.0002	<0.0002	**0.339**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.374**	<0.0002	**0.0060**	**0.351**	<0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**Not Determined**	**97.5**	**125**	**98.0**	**101**
13C8-PFOA	----	0.0002	%	**Not Determined**	**100**	**94.0**	**109**	**92.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD041_240412	0861_SD047_240411	0861_SD049_240410	0861_SD050_240411	0861_SD051_240411
				Sampling date / time	12-Apr-2024 00:00	11-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-091	EB2413910-092	EB2413910-093	EB2413910-094	EB2413910-095
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**70.2**	**33.3**	**56.8**	**35.5**	**32.4**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		**0.0015**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		**0.0022**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0192**	<0.0002	**0.0026**	<0.0002	<0.0006
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0028	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.198**	<0.0018	**0.0848**	<0.0024	<0.0052
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.0052**	<0.0002	<0.0005	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.002	<0.001	<0.002	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		**0.0036**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0060**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		**0.0014**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0054**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0005	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0005	<0.0002	<0.0005	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		**0.0020**	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0032	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0005	<0.0002	<0.0005	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0013	<0.0005	<0.0012	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0012	<0.0002	<0.0005	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD041_240412	0861_SD047_240411	0861_SD049_240410	0861_SD050_240411	0861_SD051_240411
				Sampling date / time	12-Apr-2024 00:00	11-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-091	EB2413910-092	EB2413910-093	EB2413910-094	EB2413910-095
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0013	<0.0005	<0.0012	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0013	<0.0005	<0.0012	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0013	<0.0005	<0.0012	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0013	<0.0005	<0.0012	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0005	<0.0002	<0.0005	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0005	<0.0002	<0.0005	<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		**0.244**	<0.0002	**0.0874**	<0.0002	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.217**	<0.0002	**0.0874**	<0.0002	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.235**	<0.0002	**0.0874**	<0.0002	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**95.0**	**114**	**85.0**	**118**	**102**
13C8-PFOA	----	0.0002	%		**82.5**	**97.0**	**102**	**85.0**	**108**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD052_240410	0861_SD053_240418	0861_SD056_240409	0861_SD059_240409	0861_SD064_24048
				Sampling date / time	10-Apr-2024 00:00	18-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	18-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-096	EB2413910-097	EB2413910-098	EB2413910-099	EB2413910-100
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**50.8**	**90.7**	**34.9**	**77.7**	**58.5**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	**0.0025**	**0.0010**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	**0.0005**	<0.0010	**0.0039**	**0.0012**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	**0.0033**	**0.0066**	**0.0372**	**0.0114**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0010	<0.0010	**0.0058**	**0.0010**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0006	<0.0476	**0.427**	**0.588**	**0.125**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0005	<0.0030	**0.0105**	**0.0025**
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.002	<0.005	<0.003	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	**0.0043**	**0.0002**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0005	**0.0014**	**0.0086**	**0.0011**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	**0.0026**	**0.0002**
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	**0.0012**	<0.0010	**0.0070**	**0.0007**
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	**0.0014**	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0006	<0.0010	**0.0019**	**0.0002**
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	**0.0022**	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	<0.0034	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	<0.0006	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0012	<0.0025	<0.0016	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0005	<0.0020	<0.0020	**0.0003**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD052_240410	0861_SD053_240418	0861_SD056_240409	0861_SD059_240409	0861_SD064_24048
				Sampling date / time	10-Apr-2024 00:00	18-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	18-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-096	EB2413910-097	EB2413910-098	EB2413910-099	EB2413910-100
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0012	<0.0025	<0.0016	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0012	<0.0025	<0.0016	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0012	<0.0025	<0.0016	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0012	<0.0025	<0.0016	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	<0.0006	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0005	<0.0010	<0.0006	<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	<0.0010	<0.0006	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0010	<0.0006	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0010	<0.0006	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	<0.0010	<0.0006	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		<0.0002	**0.0050**	**0.435**	**0.676**	**0.145**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	**0.0033**	**0.434**	**0.625**	**0.136**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	**0.0045**	**0.435**	**0.650**	**0.140**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**90.0**	**89.5**	**Not Determined**	**87.5**	**92.0**
13C8-PFOA	----	0.0002	%		**118**	**83.5**	**Not Determined**	**80.0**	**99.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD067_240418	0861_SD076_240409	0861_SD079_240418	0861_SD080_240418	0861_SD088_240410
				Sampling date / time	18-Apr-2024 00:00	09-Apr-2024 00:00	18-Apr-2024 00:00	18-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-101	EB2413910-102	EB2413910-103	EB2413910-104	EB2413910-105
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**53.6**	**54.8**	**41.9**	**38.4**	**45.8**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		**0.0076**	**0.0013**	**0.0004**	**0.0019**	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		**0.0136**	**0.0014**	**0.0007**	**0.0030**	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.145**	**0.0119**	**0.0075**	**0.0363**	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		**0.0098**	**0.0012**	**0.0006**	**0.0043**	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**1.68**	**0.0810**	**0.0296**	**0.222**	<0.0004
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.0450**	**0.0018**	**0.0004**	**0.0050**	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.025	**0.001**	<0.001	**0.001**	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0050	**0.0022**	<0.0002	**0.0030**	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		**0.0271**	**0.0039**	**0.0008**	**0.0046**	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0050	**0.0014**	**0.0002**	**0.0028**	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		**0.0076**	**0.0021**	**0.0005**	**0.0041**	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0050	**0.0004**	<0.0002	**0.0028**	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0050	<0.0002	<0.0002	**0.0034**	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		**0.0065**	**0.0005**	<0.0002	**0.0072**	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		**0.0076**	**0.0009**	<0.0002	**0.0089**	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0050	**0.0003**	<0.0002	**0.0036**	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0126	<0.0005	<0.0005	**0.0020**	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0050	<0.0002	<0.0002	**0.0010**	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0861_SD067_240418	0861_SD076_240409	0861_SD079_240418	0861_SD080_240418	0861_SD088_240410
			Sampling date / time	18-Apr-2024 00:00	09-Apr-2024 00:00	18-Apr-2024 00:00	18-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	EB2413910-101	EB2413910-102	EB2413910-103	EB2413910-104	EB2413910-105
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0126	<0.0005	<0.0005	<0.0006	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0126	<0.0005	<0.0005	<0.0006	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0126	<0.0005	<0.0005	<0.0006	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0126	<0.0005	<0.0005	<0.0006	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0050	<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	<0.0050	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0050	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0050	<0.0005	<0.0005	<0.0015	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0050	<0.0005	<0.0005	<0.0015	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**1.95**	**0.111**	**0.0407**	**0.317**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**1.82**	**0.0929**	**0.0371**	**0.258**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**1.87**	**0.105**	**0.0390**	**0.276**	<0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**Not Determined**	**88.0**	**106**	**118**	**128**
13C8-PFOA	----	0.0002	%	**Not Determined**	**100**	**98.0**	**105**	**102**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD089_240410	0861_SD090_240410	0861_SD091_240410	0861_SD094_240411	0861_SD099_240411
				Sampling date / time	10-Apr-2024 00:00	10-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-106	EB2413910-107	EB2413910-108	EB2413910-109	EB2413910-110
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**31.7**	**30.5**	**31.9**	**30.2**	**40.2**
EP231A: Perfluoroalkyl Sulfonic Acids									
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	<0.0002	<0.0002	<0.0002	<0.0002
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		<0.0022	<0.0004	<0.0006	**0.0063**	<0.0035
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**	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	**0.0003**	<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		<0.0002	<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	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD089_240410	0861_SD090_240410	0861_SD091_240410	0861_SD094_240411	0861_SD099_240411
				Sampling date / time	10-Apr-2024 00:00	10-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-106	EB2413910-107	EB2413910-108	EB2413910-109	EB2413910-110
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.0002	<0.0002	<0.0002	**0.0068**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	**0.0063**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	**0.0068**	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**123**	**102**	**125**	**114**	**102**
13C8-PFOA	----	0.0002	%		**108**	**100**	**114**	**102**	**97.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD100_240411	----	----	----	----
				Sampling date / time	11-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2413910-111	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**35.4**	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0031	----	----	----	----
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD100_240411	----	----	----	----
				Sampling date / time	11-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2413910-111	--------	--------	--------	--------
					Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**94.5**	----	----	----	----
13C8-PFOA	----	0.0002	%		**120**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW002_240419	0861_MW005_240415	0861_MW006_240418	0861_MW007_240418	0861_MW012_240415
				Sampling date / time	19-Apr-2024 00:00	15-Apr-2024 00:00	18-Apr-2024 00:00	18-Apr-2024 00:00	15-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-001	EB2413910-002	EB2413910-003	EB2413910-004	EB2413910-005
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	**3.20**	**1.46**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	**2.96**	**1.61**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	**0.06**	**20.2**	**13.1**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	**0.71**	**0.90**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	**0.02**	**48.4**	**20.8**	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	**0.9**	**0.4**	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	**2.15**	**0.59**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.02**	<0.02	**6.40**	**2.51**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	**0.97**	**0.44**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	**1.51**	**0.98**	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.25	<0.12	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	**0.17**	**0.11**	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.25	<0.12	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW002_240419	0861_MW005_240415	0861_MW006_240418	0861_MW007_240418	0861_MW012_240415
				Sampling date / time	19-Apr-2024 00:00	15-Apr-2024 00:00	18-Apr-2024 00:00	18-Apr-2024 00:00	15-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-001	EB2413910-002	EB2413910-003	EB2413910-004	EB2413910-005
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.25	<0.12	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.25	<0.12	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.25	<0.12	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.10	<0.05	<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	<0.10	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	**0.51**	**0.11**	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.10	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.10	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**0.02**	**0.08**	**89.9**	**43.7**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**0.08**	**68.6**	**33.9**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.02**	**0.08**	**84.2**	**40.4**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**122**	**125**	**105**	**114**	**96.9**
13C8-PFOA	----	0.02	%		**105**	**103**	**102**	**102**	**106**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW020_240415	0861_MW022_240419	0861_MW023_240418	0861_MW024_240416	0861_MW028_240418
				Sampling date / time	15-Apr-2024 00:00	19-Apr-2024 00:00	18-Apr-2024 00:00	16-Apr-2024 00:00	18-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-006	EB2413910-007	EB2413910-008	EB2413910-009	EB2413910-011
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**2.61**	**0.68**	**0.14**	**0.02**	**2.81**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**3.38**	**0.59**	**0.15**	**0.02**	**2.96**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**27.5**	**3.79**	**0.74**	**0.08**	**20.5**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**2.02**	**0.06**	<0.02	<0.02	**1.77**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**79.0**	**0.68**	**0.16**	<0.01	**32.1**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<1.2	**0.3**	<0.1	<0.1	**0.6**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**3.45**	**0.11**	<0.02	<0.02	**0.85**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**7.00**	**0.51**	**0.04**	<0.02	**4.23**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**1.90**	**0.09**	<0.02	<0.02	**0.80**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**3.17**	**0.16**	<0.01	<0.01	**1.44**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		**0.40**	<0.02	<0.02	<0.02	<0.05
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.59	<0.05	<0.05	<0.05	<0.12
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.59	<0.05	<0.05	<0.05	<0.12

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW020_240415	0861_MW022_240419	0861_MW023_240418	0861_MW024_240416	0861_MW028_240418
				Sampling date / time	15-Apr-2024 00:00	19-Apr-2024 00:00	18-Apr-2024 00:00	16-Apr-2024 00:00	18-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-006	EB2413910-007	EB2413910-008	EB2413910-009	EB2413910-011
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.59	<0.05	<0.05	<0.05	<0.12
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.59	<0.05	<0.05	<0.05	<0.12
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.59	<0.05	<0.05	<0.05	<0.12
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.24	<0.02	<0.02	<0.02	<0.05
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.24	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		**0.49**	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.24	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.24	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**132**	**7.15**	**1.28**	**0.12**	**68.1**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**106**	**4.47**	**0.90**	**0.08**	**52.6**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**125**	**6.32**	**1.08**	**0.10**	**63.3**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**93.5**	**112**	**102**	**109**	**105**
13C8-PFOA	----	0.02	%		**104**	**104**	**101**	**99.2**	**102**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW029_240418	0861_MW030_240419	0861_MW031_240419	0861_MW032_240415	0861_MW033_240417
				Sampling date / time	18-Apr-2024 00:00	19-Apr-2024 00:00	19-Apr-2024 00:00	15-Apr-2024 00:00	17-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-012	EB2413910-013	EB2413910-015	EB2413910-016	EB2413910-017
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.68**	**4.88**	<0.02	**1.60**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.76**	**4.39**	<0.02	**1.92**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**4.73**	**13.5**	<0.01	**11.2**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.32**	**0.19**	<0.02	**0.88**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**4.33**	**0.23**	<0.01	**24.1**	<0.01
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**	**1.3**	<0.1	**0.6**	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.18**	**1.85**	<0.02	**0.81**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.85**	**10.5**	<0.02	**3.93**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.15**	**1.78**	<0.02	**1.01**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.23**	**1.29**	<0.01	**2.13**	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	**0.06**	<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	<0.06	<0.05	<0.06	<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	<0.06	<0.05	<0.06	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW029_240418	0861_MW030_240419	0861_MW031_240419	0861_MW032_240415	0861_MW033_240417
				Sampling date / time	18-Apr-2024 00:00	19-Apr-2024 00:00	19-Apr-2024 00:00	15-Apr-2024 00:00	17-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-012	EB2413910-013	EB2413910-015	EB2413910-016	EB2413910-017
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.06	<0.05	<0.06	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.06	<0.05	<0.06	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.06	<0.05	<0.06	<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	**0.08**	**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		**12.3**	**39.9**	<0.01	**48.4**	**0.19**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**9.06**	**13.7**	<0.01	**35.3**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**11.2**	**35.3**	<0.01	**45.5**	**0.19**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**101**	**105**	**104**	**104**	**96.0**
13C8-PFOA	----	0.02	%		**102**	**104**	**103**	**104**	**102**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW034_240419	0861_MW035_240416	0861_MW036_240418	0861_MW037_240415	0861_MW042_240419
				Sampling date / time	19-Apr-2024 00:00	16-Apr-2024 00:00	18-Apr-2024 00:00	15-Apr-2024 00:00	19-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-018	EB2413910-019	EB2413910-020	EB2413910-021	EB2413910-022
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.02	**2.43**	**0.02**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	<0.02	**2.35**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	**0.08**	**8.14**	**0.06**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	**0.08**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	**0.84**	**0.15**
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	**0.3**	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	<0.02	**0.36**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	<0.02	**1.86**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	**0.23**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	**0.12**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW034_240419	0861_MW035_240416	0861_MW036_240418	0861_MW037_240415	0861_MW042_240419
				Sampling date / time	19-Apr-2024 00:00	16-Apr-2024 00:00	18-Apr-2024 00:00	15-Apr-2024 00:00	19-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-018	EB2413910-019	EB2413910-020	EB2413910-021	EB2413910-022
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	**0.08**	**16.7**	**0.23**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	**0.08**	**8.98**	**0.21**
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	**0.08**	**14.3**	**0.23**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**103**	**104**	**106**	**95.6**	**98.4**
13C8-PFOA	----	0.02	%		**104**	**102**	**102**	**103**	**104**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW043_240419	0861_MW044_240418	0861_MW046_240415	0861_MW047_240415	0861_MW048_240419
				Sampling date / time	19-Apr-2024 00:00	18-Apr-2024 00:00	15-Apr-2024 00:00	15-Apr-2024 00:00	19-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-023	EB2413910-024	EB2413910-025	EB2413910-026	EB2413910-027
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.21**	<0.02	**1.29**	**0.98**	**0.14**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.06**	<0.02	**1.29**	**0.85**	**0.14**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.22**	<0.01	**9.48**	**7.62**	**1.13**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	**0.99**	**0.37**	**0.04**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.24**	<0.01	**26.8**	**7.85**	**1.50**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	**3.7**	**0.5**	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	**5.04**	**0.54**	**0.03**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.08**	<0.02	**5.03**	**1.29**	**0.14**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	**1.13**	**0.13**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.01**	<0.01	**2.18**	**0.29**	**0.03**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	**0.09**	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.12	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.12	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW043_240419	0861_MW044_240418	0861_MW046_240415	0861_MW047_240415	0861_MW048_240419
				Sampling date / time	19-Apr-2024 00:00	18-Apr-2024 00:00	15-Apr-2024 00:00	15-Apr-2024 00:00	19-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-023	EB2413910-024	EB2413910-025	EB2413910-026	EB2413910-027
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.12	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.12	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.12	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.05	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.05	<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	**3.43**	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.20	<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		**0.82**	<0.01	**60.6**	**20.4**	**3.15**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.46**	<0.01	**36.3**	**15.5**	**2.63**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.76**	<0.01	**58.1**	**19.2**	**2.97**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**100**	**104**	**102**	**104**	**102**
13C8-PFOA	----	0.02	%		**105**	**99.0**	**104**	**104**	**105**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW050_240419	0861_MW055S_240416	0861_MW055D_240416	0861_SW002_240410	0861_SW003_240410
				Sampling date / time	19-Apr-2024 00:00	16-Apr-2024 00:00	16-Apr-2024 00:00	10-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-028	EB2413910-029	EB2413910-030	EB2413910-031	EB2413910-032
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.03**	**0.20**	<0.02	**0.08**	**0.05**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	**0.26**	<0.02	**0.07**	**0.04**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.07**	**1.60**	**0.03**	**0.43**	**0.30**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	**0.08**	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.15**	**1.12**	**0.03**	**0.76**	**0.55**
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	**0.04**	<0.02	**0.18**	**0.13**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	**0.18**	<0.02	**0.21**	**0.13**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	**0.04**	<0.02	**0.07**	**0.05**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	**0.08**	<0.01	**0.06**	**0.04**
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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW050_240419	0861_MW055S_240416	0861_MW055D_240416	0861_SW002_240410	0861_SW003_240410
				Sampling date / time	19-Apr-2024 00:00	16-Apr-2024 00:00	16-Apr-2024 00:00	10-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-028	EB2413910-029	EB2413910-030	EB2413910-031	EB2413910-032
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.25**	**3.60**	**0.06**	**1.86**	**1.29**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.22**	**2.72**	**0.06**	**1.19**	**0.85**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.25**	**3.26**	**0.06**	**1.79**	**1.25**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**102**	**103**	**99.0**	**107**	**99.9**
13C8-PFOA	----	0.02	%		**101**	**102**	**101**	**104**	**104**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW004_240409	0861_SW005_240409	0861_SW008_240412	0861_SW009_240412	0861_SW011_240409
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-033	EB2413910-034	EB2413910-035	EB2413910-036	EB2413910-037
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.34	<0.02	**0.14**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	**0.23**	<0.02	**0.15**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.01**	<0.01	**1.63**	<0.01	**1.60**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	**0.08**	<0.02	**0.07**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.02**	<0.01	**2.56**	**0.02**	**2.44**
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	**0.34**	<0.02	**0.12**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	**0.58**	<0.02	**0.35**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	**0.12**	<0.02	**0.05**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	**0.18**	<0.01	**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 (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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW004_240409	0861_SW005_240409	0861_SW008_240412	0861_SW009_240412	0861_SW011_240409
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-033	EB2413910-034	EB2413910-035	EB2413910-036	EB2413910-037
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	**0.08**	<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		**0.03**	<0.01	**5.90**	**0.02**	**5.00**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.03**	<0.01	**4.19**	**0.02**	**4.04**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.03**	<0.01	**5.59**	**0.02**	**4.78**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**101**	**108**	**102**	**107**	**101**
13C8-PFOA	----	0.02	%		**101**	**104**	**102**	**107**	**102**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW015_240409	0861_SW016_240409	0861_SW018_240409	0861_SW020_240409	0861_SW021_240410
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-038	EB2413910-039	EB2413910-040	EB2413910-041	EB2413910-042
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.22**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.24**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	**2.02**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.10**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	<0.01	**0.01**	<0.01	**6.06**
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	**0.2**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.28**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.58**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.11**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	**0.28**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.03**
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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW015_240409	0861_SW016_240409	0861_SW018_240409	0861_SW020_240409	0861_SW021_240410
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-038	EB2413910-039	EB2413910-040	EB2413910-041	EB2413910-042
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	**0.01**	<0.01	**10.2**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	**0.01**	<0.01	**8.08**
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	**0.01**	<0.01	**9.75**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**102**	**106**	**103**	**108**	**104**
13C8-PFOA	----	0.02	%		**103**	**106**	**104**	**100**	**104**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW027_240409	0861_SW028_240409	0861_SW030_240409	0861_SW034_240409	0861_SW036_240411
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-045	EB2413910-046	EB2413910-047	EB2413910-048	EB2413910-049
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.17**	<0.02	**0.25**	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.20**	<0.02	**0.24**	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**1.92**	<0.01	**2.26**	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.10**	<0.02	**0.11**	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**4.88**	**0.02**	**3.26**	<0.01	**0.01**
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		**0.12**	<0.02	**0.31**	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.34**	<0.02	**0.54**	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.07**	<0.02	**0.11**	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.10**	<0.01	**0.14**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW027_240409	0861_SW028_240409	0861_SW030_240409	0861_SW034_240409	0861_SW036_240411
				Sampling date / time	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-045	EB2413910-046	EB2413910-047	EB2413910-048	EB2413910-049
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	**0.39**	<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		**7.90**	**0.02**	**7.71**	<0.01	**0.01**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**6.80**	**0.02**	**5.52**	<0.01	**0.01**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**7.60**	**0.02**	**7.36**	<0.01	**0.01**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**107**	**105**	**95.6**	**107**	**107**
13C8-PFOA	----	0.02	%		**104**	**104**	**99.5**	**102**	**102**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW037_240410	0861_SW041_240412	0861_SW047_240411	0861_SW049_240410	0861_SW050_240411
				Sampling date / time	10-Apr-2024 00:00	12-Apr-2024 00:00	11-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-050	EB2413910-051	EB2413910-052	EB2413910-053	EB2413910-054
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.38**	**0.67**	<0.02	**0.07**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.34**	**0.67**	<0.02	**0.04**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**2.09**	**5.20**	<0.01	**0.29**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.09**	**0.28**	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**2.42**	**5.41**	<0.01	**1.00**	**0.01**
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		**0.2**	**0.2**	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.38**	**0.32**	<0.02	**0.06**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.70**	**1.12**	<0.02	**0.12**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.13**	**0.16**	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.15**	**0.25**	<0.01	**0.04**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW037_240410	0861_SW041_240412	0861_SW047_240411	0861_SW049_240410	0861_SW050_240411
				Sampling date / time	10-Apr-2024 00:00	12-Apr-2024 00:00	11-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-050	EB2413910-051	EB2413910-052	EB2413910-053	EB2413910-054
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**6.88**	**14.3**	<0.01	**1.62**	**0.01**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**4.51**	**10.6**	<0.01	**1.29**	**0.01**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**6.45**	**13.3**	<0.01	**1.58**	**0.01**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**107**	**103**	**99.9**	**106**	**106**
13C8-PFOA	----	0.02	%		**103**	**100**	**107**	**105**	**98.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW051_240411	0861_SW052_240410	0861_SW053_240418	0861_SW056_240409	0861_SW059_240409
				Sampling date / time	11-Apr-2024 00:00	10-Apr-2024 00:00	18-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-055	EB2413910-056	EB2413910-057	EB2413910-058	EB2413910-059
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.02	**0.14**	**1.07**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	<0.02	**0.13**	**1.08**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	**0.13**	**0.90**	**6.10**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	**0.04**	**0.28**
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.04**	<0.01	**0.17**	**1.29**	**8.67**
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**	**0.9**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	<0.02	**0.24**	**2.24**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	**0.02**	**0.34**	**2.93**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	**0.08**	**0.75**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	**0.10**	**1.00**
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	**0.06**
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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW051_240411	0861_SW052_240410	0861_SW053_240418	0861_SW056_240409	0861_SW059_240409
				Sampling date / time	11-Apr-2024 00:00	10-Apr-2024 00:00	18-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-055	EB2413910-056	EB2413910-057	EB2413910-058	EB2413910-059
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	**0.32**
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		**0.04**	<0.01	**0.32**	**3.36**	**25.4**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.04**	<0.01	**0.30**	**2.19**	**14.8**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.04**	<0.01	**0.32**	**3.19**	**24.0**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**100**	**100**	**95.8**	**108**	**102**
13C8-PFOA	----	0.02	%		**101**	**99.1**	**99.7**	**99.8**	**101**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW064_240418	0861_SW076_240409	0861_SW079_240418	0861_SW080_240418	0861_SW088_240410
				Sampling date / time	18-Apr-2024 00:00	09-Apr-2024 00:00	18-Apr-2024 00:00	18-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-060	EB2413910-061	EB2413910-062	EB2413910-063	EB2413910-064
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.51**	**0.56**	**1.00**	**2.97**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.32**	**0.52**	**1.13**	**3.29**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**1.29**	**3.38**	**8.35**	**24.8**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.03	**0.17**	**0.41**	**1.32**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**1.44**	**4.73**	**7.47**	**27.8**	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		**0.3**	**0.4**	**0.3**	<0.5	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.23**	**0.99**	**0.52**	**1.29**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.45**	**1.34**	**1.90**	**4.99**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.04**	**0.32**	**0.25**	**0.66**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.06**	**0.40**	**0.45**	**1.26**	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.03	<0.02	<0.11	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.06	<0.26	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.06	<0.26	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW064_240418	0861_SW076_240409	0861_SW079_240418	0861_SW080_240418	0861_SW088_240410
				Sampling date / time	18-Apr-2024 00:00	09-Apr-2024 00:00	18-Apr-2024 00:00	18-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-060	EB2413910-061	EB2413910-062	EB2413910-063	EB2413910-064
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.06	<0.26	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.06	<0.26	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.06	<0.26	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.11	<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	<0.11	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	**0.06**	<0.05	<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	<0.11	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.11	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**4.64**	**12.9**	**21.8**	**68.4**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**2.73**	**8.11**	**15.8**	**52.6**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**4.32**	**12.2**	**20.2**	**63.8**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**106**	**101**	**104**	**112**	**109**
13C8-PFOA	----	0.02	%		**100**	**103**	**101**	**96.3**	**95.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW089_240410	0861_SW090_240410	0861_SW091_240410	0861_SW094_240411	0861_SW099_240411
				Sampling date / time	10-Apr-2024 00:00	10-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-065	EB2413910-066	EB2413910-067	EB2413910-068	EB2413910-069
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	**0.02**	<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		<0.01	<0.01	<0.01	**0.05**	<0.01
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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW089_240410	0861_SW090_240410	0861_SW091_240410	0861_SW094_240411	0861_SW099_240411
				Sampling date / time	10-Apr-2024 00:00	10-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413910-065	EB2413910-066	EB2413910-067	EB2413910-068	EB2413910-069
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	<0.01	**0.07**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	**0.07**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	**0.07**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**105**	**97.5**	**102**	**93.7**	**104**
13C8-PFOA	----	0.02	%		**97.6**	**98.1**	**98.1**	**99.7**	**103**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW100_240411	0861_MW309_240415	----	----	----
				Sampling date / time	11-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413910-070	EB2413910-112	--------	--------	--------
					Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.02	<0.02	----	----	----
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	0.01	µg/L		<0.01	**0.03**	----	----	----
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		<0.02	<0.02	----	----	----
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	<0.01	----	----	----
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW100_240411	0861_MW309_240415	----	----	----
				Sampling date / time	11-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413910-070	EB2413910-112	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	**0.03**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**0.03**	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	**0.03**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**98.9**	**111**	----	----	----
13C8-PFOA	----	0.02	%		**101**	**98.3**	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2413910**	Page	: 1 of 23
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Contact	: [redacted]
Address	: [redacted]	Address	[redacted]
Telephone	: [redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 26-Apr-2024
C-O-C number	: ----	Issue Date	: 14-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 109		
No. of samples analysed	: 108		

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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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: 5753249)									
EB2413882-021	Anonymous	EA055: Moisture Content	----	0.1	%	33.7	36.4	7.7	0% - 20%
EB2413882-039	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	27.2	25.1	7.9	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5753251)									
EB2413910-080	0861_SD018_240409	EA055: Moisture Content	----	0.1	%	33.8	31.8	6.2	0% - 20%
EB2413910-090	0861_SD038_240418	EA055: Moisture Content	----	0.1	%	45.4	48.6	6.9	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5753256)									
EB2413910-100	0861_SD064_24048	EA055: Moisture Content	----	0.1	%	58.5	55.7	4.9	0% - 20%
EB2413910-110	0861_SD099_240411	EA055: Moisture Content	----	0.1	%	40.2	40.8	1.3	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5753232)									
EB2413882-021	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	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EB2413882-039	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	<0.0002	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 (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5753232) - continued									
EB2413882-039	Anonymous	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5753250)									
EB2413910-080	0861_SD018_240409	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	0.0034	# 0.0020	54.6	0% - 50%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EB2413910-090	0861_SD038_240418	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 (0.0016)*	mg/kg	<0.0016	<0.0016	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5753255)									
EB2413910-100	0861_SD064_24048	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0010	0.0011	12.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0012	0.0011	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0114	0.0110	3.7	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0010	0.0010	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.125	0.124	0.5	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0025	0.0026	0.0	0% - 50%
EB2413910-110	0861_SD099_240411	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 (0.0035)*	mg/kg	<0.0035	<0.0035	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5753232)									
EB2413882-021	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	<0.0002	<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

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: 5753232) - continued									
EB2413882-021	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
EB2413882-039	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	<0.0002	<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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5753250)									
EB2413910-080	0861_SD018_240409	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 (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
EB2413910-090	0861_SD038_240418	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 (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

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: 5753255)									
EB2413910-100	0861_SD064_24048	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	0.0011	0.0011	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	0.0007	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 (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
EB2413910-110	0861_SD099_240411	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 (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: 5753232)									
EB2413882-021	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
EB2413882-039	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

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: 5753232) - continued									
EB2413882-039	Anonymous	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5753250)									
EB2413910-080	0861_SD018_240409	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
EB2413910-090	0861_SD038_240418	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5753255)									
EB2413910-100	0861_SD064_24048	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0003	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: 5753255) - continued									
EB2413910-100	0861_SD064_24048	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
EB2413910-110	0861_SD099_240411	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: 5753232)									
EB2413882-021	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
EB2413882-039	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5753250)									

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5753250) - continued									
EB2413910-080	0861_SD018_240409	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
EB2413910-090	0861_SD038_240418	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5753255)									
EB2413910-100	0861_SD064_24048	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
EB2413910-110	0861_SD099_240411	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 sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5771280)									
EB2413849-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.03	0.03	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	<0.02	<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: 5771280) - continued									
EB2413849-001	Anonymous	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	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
EB2413849-003	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: 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: 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: 5771280)									
EB2413849-001	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	0.04	0.04	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EB2413849-003	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5771280)									
EB2413849-001	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: 5771280) - continued									
EB2413849-001	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
EB2413849-003	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
		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: 5771280)									
EB2413849-001	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
EB2413849-003	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	<0.05	<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

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5753232)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	103	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	102	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	110	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	107	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	106	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	93.3	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5753250)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	97.3	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	102	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	100	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	105	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	109	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	100	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5753255)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	88.6	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	104	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	98.7	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	99.2	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	100	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	92.9	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753232)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	104	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	101	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.2	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.8	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	69.0	135

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753232) - continued								
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753250)								
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	94.8	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.0	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.8	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753255)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	106	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.0	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	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	101	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	91.8	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753232)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.8	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.4	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	61.9	137

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753232) - continued								
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	118	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753250)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	118	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.6	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	77.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753255)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.4	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	75.0	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.2	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.9	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753232)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	97.0	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	106	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	100	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	88.3	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753250)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	104	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	97.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	92.9	65.0	137

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753250) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	91.2	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753255)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	114	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	132	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	68.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	77.5	54.8	124

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	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771280)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	97.4	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	88.2	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	87.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	75.2	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	109	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	83.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771281)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	92.9	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	100	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	96.3	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	84.0	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	93.5	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	72.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771282)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	119	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	124	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	121	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	124	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	127	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	113	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771283)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	122	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	127	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	121	68.0	131

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771283) - continued								
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	115	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	117	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	93.8	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771280)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.6	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	79.8	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	78.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	80.8	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	84.2	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	84.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	82.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	81.2	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	78.0	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	83.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	82.2	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771281)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	90.1	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	81.6	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	81.8	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	86.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	82.2	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	78.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	89.2	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	77.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771282)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	118	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	119	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	114	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	123	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	120	69.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771282) - continued								
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	116	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	132	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	142	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	124	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771283)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	118	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	101	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	105	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	106	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	104	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	92.4	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	115	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771280)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	91.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	88.8	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	76.3	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	83.8	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	82.8	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	75.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	76.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771281)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	93.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	90.9	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	98.9	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	88.5	68.3	134

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771281) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	93.2	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	95.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	95.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771282)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	127	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	141	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	122	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	125	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	132	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	106	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	133	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771283)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	113	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	139	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	98.0	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	105	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	111	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	101	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	118	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771280)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	94.8	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	86.2	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	79.2	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	88.2	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771281)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	99.6	63.0	143

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771281) - continued								
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	90.6	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	100	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	76.8	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771282)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	128	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	130	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	124	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	108	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771283)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	122	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	108	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	116	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	93.6	64.2	133

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5753232)							
EB2413882-022	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	105	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	108	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	113	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	115	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	111	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	108	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5753250)							
EB2413910-081	0861_SD020_240409	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	88.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	90.6	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	89.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	88.2	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	88.6	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	106	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5753255)							

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: 5753255) - continued							
EB2413910-101	0861_SD067_240418	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	# Not Determined	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	# Not Determined	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	# Not Determined	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	# Not Determined	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	# Not Determined	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753232)							
EB2413882-022	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	110	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	100	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	103	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	107	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	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	98.8	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	112	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	86.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	84.8	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	119	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753250)							
EB2413910-081	0861_SD020_240409	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	107	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	79.2	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	92.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	96.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	94.0	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	97.2	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	92.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	90.4	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	82.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	78.8	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	93.9	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5753255)							
EB2413910-101	0861_SD067_240418	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	# Not Determined	71.0	135

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: 5753255) - continued							
EB2413910-101	0861_SD067_240418	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	# Not Determined	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	# Not Determined	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	# Not Determined	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	# Not Determined	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	# Not Determined	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	# Not Determined	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	# Not Determined	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	# Not Determined	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753232)							
EB2413882-022	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	107	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	108	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	91.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	97.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	112	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	131	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	125	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753250)							
EB2413910-081	0861_SD020_240409	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	107	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	109	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	85.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	97.4	70.0	130

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: 5753250) - continued							
EB2413910-081	0861_SD020_240409	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	86.7	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	87.2	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	104	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5753255)							
EB2413910-101	0861_SD067_240418	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	# Not Determined	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	# Not Determined	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	# Not Determined	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753232)							
EB2413882-022	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	99.1	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	105	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	95.4	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753250)							
EB2413910-081	0861_SD020_240409	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	88.0	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	100	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	106	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	120	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753255)							
EB2413910-101	0861_SD067_240418	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	# Not Determined	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	# Not Determined	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	# Not Determined	65.0	137

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5753255) - continued							
EB2413910-101	0861_SD067_240418	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	# Not Determined	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771280)							
EB2413849-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	99.4	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	94.0	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	90.4	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	79.6	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	111	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	91.1	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771280)							
EB2413849-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	94.4	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	82.4	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	77.8	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	80.6	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	84.2	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	82.8	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	85.2	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	81.8	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	83.8	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	89.0	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	88.3	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771280)							
EB2413849-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	92.2	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	79.9	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	84.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	86.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	92.1	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	78.0	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	82.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771280)							

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: 5771280) - continued							
EB2413849-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	87.2	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	97.4	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	88.3	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	79.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2413910**	Page	: 1 of 21
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 14-May-2024
Sampler	: AECOM	No. of samples received	: 109
Order number	: 60612563 3.1	No. of samples analysed	: 108

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 Laboratory Control outliers occur.**
- **Duplicate outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, 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

- **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: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EP231A: Perfluoroalkyl Sulfonic Acids	EB2413910--080	0861_SD018_240409	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	54.6 %	0% - 50%	**RPD exceeds LOR based limits**
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EB2413910--101	0861_SD067_240418	**Perfluoropentane sulfonic acid (PFPeS)**	2706-91-4	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EB2413910--101	0861_SD067_240418	**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	EB2413910--101	0861_SD067_240418	**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	EB2413910--101	0861_SD067_240418	**Perfluorodecane sulfonic acid (PFDS)**	335-77-3	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231B: Perfluoroalkyl Carboxylic Acids	EB2413910--101	0861_SD067_240418	**Perfluorohexanoic acid (PFHxA)**	307-24-4	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar							
0861_SD004_240409,	0861_SD005_240409,	----	----	----	26-Apr-2024	23-Apr-2024	**3**
0861_SD011_240409,	0861_SD015_240409,						
0861_SD016_240409,	0861_SD018_240409,						
0861_SD020_240409,	0861_SD027_240409,						
0861_SD028_240409,	0861_SD030_240409,						
0861_SD033_240409,	0861_SD034_240409,						
0861_SD056_240409,	0861_SD059_240409,						
0861_SD076_240409							
HDPE Soil Jar							
0861_SD002_240410,	0861_SD003_240410,	----	----	----	26-Apr-2024	24-Apr-2024	**2**
0861_SD021_240410,	0861_SD037_240410,						
0861_SD049_240410,	0861_SD052_240410,						
0861_SD088_240410,	0861_SD089_240410,						
0861_SD090_240410,	0861_SD091_240410						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EA055: Moisture Content (Dried @ 105-110°C) - Analysis Holding Time Compliance						
HDPE Soil Jar						
0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	----	----	----	26-Apr-2024	25-Apr-2024	1

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count: QC	Count: Regular	Rate (%): Actual	Rate (%): Expected	Quality Control Specification
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	77	2.60	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	77	1.30	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: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055)							
0861_SD004_240409, 0861_SD005_240409, 0861_SD011_240409, 0861_SD015_240409, 0861_SD016_240409, 0861_SD018_240409, 0861_SD020_240409, 0861_SD027_240409, 0861_SD028_240409, 0861_SD030_240409, 0861_SD033_240409, 0861_SD034_240409, 0861_SD056_240409, 0861_SD059_240409, 0861_SD076_240409	**09-Apr-2024**	**----**	----	**----**	**26-Apr-2024**	23-Apr-2024	×
HDPE Soil Jar (EA055)							

Matrix: **SOIL**

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
EA055: Moisture Content (Dried @ 105-110°C) - Continued							
0861_SD002_240410, 0861_SD003_240410, 0861_SD021_240410, 0861_SD037_240410, 0861_SD049_240410, 0861_SD052_240410, 0861_SD088_240410, 0861_SD089_240410, 0861_SD090_240410, 0861_SD091_240410	**10-Apr-2024**	**----**	----	----	**26-Apr-2024**	24-Apr-2024	×
HDPE Soil Jar (EA055) 0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	**11-Apr-2024**	**----**	----	----	**26-Apr-2024**	25-Apr-2024	×
HDPE Soil Jar (EA055) 0861_SD008_240412, 0861_SD009_240412, 0861_SD041_240412	**12-Apr-2024**	**----**	----	----	**26-Apr-2024**	26-Apr-2024	✓
HDPE Soil Jar (EA055) 0861_SD038_240418, 0861_SD053_240418, 0861_SD064_24048, 0861_SD067_240418, 0861_SD079_240418, 0861_SD080_240418	**18-Apr-2024**	**----**	----	----	**26-Apr-2024**	02-May-2024	✓

Matrix: **SOIL**

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD004_240409, 0861_SD005_240409, 0861_SD011_240409, 0861_SD015_240409, 0861_SD016_240409, 0861_SD018_240409, 0861_SD020_240409, 0861_SD027_240409, 0861_SD028_240409, 0861_SD030_240409, 0861_SD033_240409, 0861_SD034_240409, 0861_SD056_240409, 0861_SD059_240409, 0861_SD076_240409	**09-Apr-2024**	**02-May-2024**	06-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD002_240410, 0861_SD003_240410, 0861_SD021_240410, 0861_SD037_240410, 0861_SD049_240410, 0861_SD052_240410, 0861_SD088_240410, 0861_SD089_240410, 0861_SD090_240410, 0861_SD091_240410	**10-Apr-2024**	**02-May-2024**	07-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	**11-Apr-2024**	**02-May-2024**	08-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD008_240412, 0861_SD009_240412, 0861_SD041_240412	**12-Apr-2024**	**02-May-2024**	09-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD038_240418, 0861_SD053_240418, 0861_SD064_24048, 0861_SD067_240418, 0861_SD079_240418, 0861_SD080_240418	**18-Apr-2024**	**02-May-2024**	15-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓

Matrix: **SOIL**

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0861_SD004_240409, 0861_SD005_240409, 0861_SD011_240409, 0861_SD015_240409, 0861_SD016_240409, 0861_SD018_240409, 0861_SD020_240409, 0861_SD027_240409, 0861_SD028_240409, 0861_SD030_240409, 0861_SD033_240409, 0861_SD034_240409, 0861_SD056_240409, 0861_SD059_240409, 0861_SD076_240409	**09-Apr-2024**	**02-May-2024**	06-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD002_240410, 0861_SD003_240410, 0861_SD021_240410, 0861_SD037_240410, 0861_SD049_240410, 0861_SD052_240410, 0861_SD088_240410, 0861_SD089_240410, 0861_SD090_240410, 0861_SD091_240410	**10-Apr-2024**	**02-May-2024**	07-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	**11-Apr-2024**	**02-May-2024**	08-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD008_240412, 0861_SD009_240412, 0861_SD041_240412	**12-Apr-2024**	**02-May-2024**	09-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD038_240418, 0861_SD053_240418, 0861_SD064_24048, 0861_SD067_240418, 0861_SD079_240418, 0861_SD080_240418	**18-Apr-2024**	**02-May-2024**	15-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓

Matrix: **SOIL**

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0861_SD004_240409, 0861_SD005_240409, 0861_SD011_240409, 0861_SD015_240409, 0861_SD016_240409, 0861_SD018_240409, 0861_SD020_240409, 0861_SD027_240409, 0861_SD028_240409, 0861_SD030_240409, 0861_SD033_240409, 0861_SD034_240409, 0861_SD056_240409, 0861_SD059_240409, 0861_SD076_240409	**09-Apr-2024**	**02-May-2024**	06-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD002_240410, 0861_SD003_240410, 0861_SD021_240410, 0861_SD037_240410, 0861_SD049_240410, 0861_SD052_240410, 0861_SD088_240410, 0861_SD089_240410, 0861_SD090_240410, 0861_SD091_240410	**10-Apr-2024**	**02-May-2024**	07-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	**11-Apr-2024**	**02-May-2024**	08-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD008_240412, 0861_SD009_240412, 0861_SD041_240412	**12-Apr-2024**	**02-May-2024**	09-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD038_240418, 0861_SD053_240418, 0861_SD064_24048, 0861_SD067_240418, 0861_SD079_240418, 0861_SD080_240418	**18-Apr-2024**	**02-May-2024**	15-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓

Matrix: **SOIL**

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD004_240409, 0861_SD005_240409, 0861_SD011_240409, 0861_SD015_240409, 0861_SD016_240409, 0861_SD018_240409, 0861_SD020_240409, 0861_SD027_240409, 0861_SD028_240409, 0861_SD030_240409, 0861_SD033_240409, 0861_SD034_240409, 0861_SD056_240409, 0861_SD059_240409, 0861_SD076_240409	**09-Apr-2024**	**02-May-2024**	06-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD002_240410, 0861_SD003_240410, 0861_SD021_240410, 0861_SD037_240410, 0861_SD049_240410, 0861_SD052_240410, 0861_SD088_240410, 0861_SD089_240410, 0861_SD090_240410, 0861_SD091_240410	**10-Apr-2024**	**02-May-2024**	07-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	**11-Apr-2024**	**02-May-2024**	08-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD008_240412, 0861_SD009_240412, 0861_SD041_240412	**12-Apr-2024**	**02-May-2024**	09-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD038_240418, 0861_SD053_240418, 0861_SD064_24048, 0861_SD067_240418, 0861_SD079_240418, 0861_SD080_240418	**18-Apr-2024**	**02-May-2024**	15-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓

Matrix: **SOIL**

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
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0861_SD004_240409, 0861_SD005_240409, 0861_SD011_240409, 0861_SD015_240409, 0861_SD016_240409, 0861_SD018_240409, 0861_SD020_240409, 0861_SD027_240409, 0861_SD028_240409, 0861_SD030_240409, 0861_SD033_240409, 0861_SD034_240409, 0861_SD056_240409, 0861_SD059_240409, 0861_SD076_240409	**09-Apr-2024**	**02-May-2024**	06-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD002_240410, 0861_SD003_240410, 0861_SD021_240410, 0861_SD037_240410, 0861_SD049_240410, 0861_SD052_240410, 0861_SD088_240410, 0861_SD089_240410, 0861_SD090_240410, 0861_SD091_240410	**10-Apr-2024**	**02-May-2024**	07-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD036_240411, 0861_SD047_240411, 0861_SD050_240411, 0861_SD051_240411, 0861_SD094_240411, 0861_SD099_240411, 0861_SD100_240411	**11-Apr-2024**	**02-May-2024**	08-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD008_240412, 0861_SD009_240412, 0861_SD041_240412	**12-Apr-2024**	**02-May-2024**	09-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD038_240418, 0861_SD053_240418, 0861_SD064_24048, 0861_SD067_240418, 0861_SD079_240418, 0861_SD080_240418	**18-Apr-2024**	**02-May-2024**	15-Oct-2024	✓	**09-May-2024**	11-Jun-2024	✓

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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_SW004_240409, 0861_SW005_240409, 0861_SW011_240409, 0861_SW015_240409, 0861_SW016_240409, 0861_SW018_240409, 0861_SW020_240409, 0861_SW027_240409, 0861_SW028_240409, 0861_SW030_240409, 0861_SW034_240409, 0861_SW056_240409, 0861_SW059_240409, 0861_SW076_240409	**09-Apr-2024**	**10-May-2024**	06-Oct-2024	✓	**10-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW002_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW003_240410, 0861_SW021_240410, 0861_SW037_240410, 0861_SW049_240410, 0861_SW052_240410, 0861_SW088_240410, 0861_SW089_240410, 0861_SW090_240410, 0861_SW091_240410	**10-Apr-2024**	**10-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW036_240411, 0861_SW047_240411, 0861_SW050_240411, 0861_SW051_240411, 0861_SW094_240411, 0861_SW099_240411, 0861_SW100_240411	**11-Apr-2024**	**10-May-2024**	08-Oct-2024	✓	**10-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW008_240412, 0861_SW009_240412, 0861_SW041_240412	**12-Apr-2024**	**10-May-2024**	09-Oct-2024	✓	**10-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW005_240415, 0861_MW012_240415, 0861_MW020_240415, 0861_MW032_240415, 0861_MW037_240415, 0861_MW046_240415, 0861_MW047_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**10-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_240416, 0861_MW035_240416, 0861_MW055S_240416, 0861_MW055D_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**10-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW033_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**10-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW006_240418, 0861_MW007_240418, 0861_MW023_240418, 0861_MW028_240418, 0861_MW029_240418, 0861_MW036_240418, 0861_MW044_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW053_240418, 0861_SW064_240418, 0861_SW079_240418, 0861_SW080_240418	**18-Apr-2024**	**10-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231A: Perfluoroalkyl Sulfonic Acids - Continued							
0861_MW002_240419, 0861_MW022_240419, 0861_MW030_240419, 0861_MW031_240419, 0861_MW034_240419, 0861_MW042_240419, 0861_MW043_240419, 0861_MW048_240419, 0861_MW050_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**10-May-2024**	16-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW309_240415	**24-Apr-2024**	**10-May-2024**	21-Oct-2024	✓	**10-May-2024**	21-Oct-2024	✓

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0861_SW004_240409, 0861_SW005_240409, 0861_SW011_240409, 0861_SW015_240409, 0861_SW016_240409, 0861_SW018_240409, 0861_SW020_240409, 0861_SW027_240409, 0861_SW028_240409, 0861_SW030_240409, 0861_SW034_240409, 0861_SW056_240409, 0861_SW059_240409, 0861_SW076_240409	**09-Apr-2024**	**10-May-2024**	06-Oct-2024	✓	**10-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW002_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW003_240410, 0861_SW021_240410, 0861_SW037_240410, 0861_SW049_240410, 0861_SW052_240410, 0861_SW088_240410, 0861_SW089_240410, 0861_SW090_240410, 0861_SW091_240410	**10-Apr-2024**	**10-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW036_240411, 0861_SW047_240411, 0861_SW050_240411, 0861_SW051_240411, 0861_SW094_240411, 0861_SW099_240411, 0861_SW100_240411	**11-Apr-2024**	**10-May-2024**	08-Oct-2024	✓	**10-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW008_240412, 0861_SW009_240412, 0861_SW041_240412	**12-Apr-2024**	**10-May-2024**	09-Oct-2024	✓	**10-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW005_240415, 0861_MW012_240415, 0861_MW020_240415, 0861_MW032_240415, 0861_MW037_240415, 0861_MW046_240415, 0861_MW047_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**10-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_240416, 0861_MW035_240416, 0861_MW055S_240416, 0861_MW055D_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**10-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW033_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**10-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW006_240418, 0861_MW007_240418, 0861_MW023_240418, 0861_MW028_240418, 0861_MW029_240418, 0861_MW036_240418, 0861_MW044_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW053_240418, 0861_SW064_240418, 0861_SW079_240418, 0861_SW080_240418	**18-Apr-2024**	**10-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231B: Perfluoroalkyl Carboxylic Acids - Continued							
0861_MW002_240419, 0861_MW022_240419, 0861_MW030_240419, 0861_MW031_240419, 0861_MW034_240419, 0861_MW042_240419, 0861_MW043_240419, 0861_MW048_240419, 0861_MW050_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**10-May-2024**	16-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW309_240415	**24-Apr-2024**	**10-May-2024**	21-Oct-2024	✓	**10-May-2024**	21-Oct-2024	✓

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0861_SW004_240409, 0861_SW005_240409, 0861_SW011_240409, 0861_SW015_240409, 0861_SW016_240409, 0861_SW018_240409, 0861_SW020_240409, 0861_SW027_240409, 0861_SW028_240409, 0861_SW030_240409, 0861_SW034_240409, 0861_SW056_240409, 0861_SW059_240409, 0861_SW076_240409	**09-Apr-2024**	**10-May-2024**	06-Oct-2024	✓	**10-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW002_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW003_240410, 0861_SW021_240410, 0861_SW037_240410, 0861_SW049_240410, 0861_SW052_240410, 0861_SW088_240410, 0861_SW089_240410, 0861_SW090_240410, 0861_SW091_240410	**10-Apr-2024**	**10-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW036_240411, 0861_SW047_240411, 0861_SW050_240411, 0861_SW051_240411, 0861_SW094_240411, 0861_SW099_240411, 0861_SW100_240411	**11-Apr-2024**	**10-May-2024**	08-Oct-2024	✓	**10-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW008_240412, 0861_SW009_240412, 0861_SW041_240412	**12-Apr-2024**	**10-May-2024**	09-Oct-2024	✓	**10-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW005_240415, 0861_MW012_240415, 0861_MW020_240415, 0861_MW032_240415, 0861_MW037_240415, 0861_MW046_240415, 0861_MW047_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**10-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_240416, 0861_MW035_240416, 0861_MW055S_240416, 0861_MW055D_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**10-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW033_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**10-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW006_240418, 0861_MW007_240418, 0861_MW023_240418, 0861_MW028_240418, 0861_MW029_240418, 0861_MW036_240418, 0861_MW044_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW053_240418, 0861_SW064_240418, 0861_SW079_240418, 0861_SW080_240418	**18-Apr-2024**	**10-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231C: Perfluoroalkyl Sulfonamides - Continued							
0861_MW002_240419, 0861_MW022_240419, 0861_MW030_240419, 0861_MW031_240419, 0861_MW034_240419, 0861_MW042_240419, 0861_MW043_240419, 0861_MW048_240419, 0861_MW050_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**10-May-2024**	16-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW309_240415	**24-Apr-2024**	**10-May-2024**	21-Oct-2024	✓	**10-May-2024**	21-Oct-2024	✓

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_SW004_240409, 0861_SW005_240409, 0861_SW011_240409, 0861_SW015_240409, 0861_SW016_240409, 0861_SW018_240409, 0861_SW020_240409, 0861_SW027_240409, 0861_SW028_240409, 0861_SW030_240409, 0861_SW034_240409, 0861_SW056_240409, 0861_SW059_240409, 0861_SW076_240409	**09-Apr-2024**	**10-May-2024**	06-Oct-2024	✓	**10-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW002_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW003_240410, 0861_SW021_240410, 0861_SW037_240410, 0861_SW049_240410, 0861_SW052_240410, 0861_SW088_240410, 0861_SW089_240410, 0861_SW090_240410, 0861_SW091_240410	**10-Apr-2024**	**10-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW036_240411, 0861_SW047_240411, 0861_SW050_240411, 0861_SW051_240411, 0861_SW094_240411, 0861_SW099_240411, 0861_SW100_240411	**11-Apr-2024**	**10-May-2024**	08-Oct-2024	✓	**10-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW008_240412, 0861_SW009_240412, 0861_SW041_240412	**12-Apr-2024**	**10-May-2024**	09-Oct-2024	✓	**10-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW005_240415, 0861_MW012_240415, 0861_MW020_240415, 0861_MW032_240415, 0861_MW037_240415, 0861_MW046_240415, 0861_MW047_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**10-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_240416, 0861_MW035_240416, 0861_MW055S_240416, 0861_MW055D_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**10-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW033_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**10-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW006_240418, 0861_MW007_240418, 0861_MW023_240418, 0861_MW028_240418, 0861_MW029_240418, 0861_MW036_240418, 0861_MW044_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW053_240418, 0861_SW064_240418, 0861_SW079_240418, 0861_SW080_240418	**18-Apr-2024**	**10-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued							
0861_MW002_240419, 0861_MW022_240419, 0861_MW030_240419, 0861_MW031_240419, 0861_MW034_240419, 0861_MW042_240419, 0861_MW043_240419, 0861_MW048_240419, 0861_MW050_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**10-May-2024**	16-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW309_240415	**24-Apr-2024**	**10-May-2024**	21-Oct-2024	✓	**10-May-2024**	21-Oct-2024	✓

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
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0861_SW004_240409, 0861_SW005_240409, 0861_SW011_240409, 0861_SW015_240409, 0861_SW016_240409, 0861_SW018_240409, 0861_SW020_240409, 0861_SW027_240409, 0861_SW028_240409, 0861_SW030_240409, 0861_SW034_240409, 0861_SW056_240409, 0861_SW059_240409, 0861_SW076_240409	**09-Apr-2024**	**10-May-2024**	06-Oct-2024	✓	**10-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW002_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW003_240410, 0861_SW021_240410, 0861_SW037_240410, 0861_SW049_240410, 0861_SW052_240410, 0861_SW088_240410, 0861_SW089_240410, 0861_SW090_240410, 0861_SW091_240410	**10-Apr-2024**	**10-May-2024**	07-Oct-2024	✓	**10-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW036_240411, 0861_SW047_240411, 0861_SW050_240411, 0861_SW051_240411, 0861_SW094_240411, 0861_SW099_240411, 0861_SW100_240411	**11-Apr-2024**	**10-May-2024**	08-Oct-2024	✓	**10-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW008_240412, 0861_SW009_240412, 0861_SW041_240412	**12-Apr-2024**	**10-May-2024**	09-Oct-2024	✓	**10-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW005_240415, 0861_MW012_240415, 0861_MW020_240415, 0861_MW032_240415, 0861_MW037_240415, 0861_MW046_240415, 0861_MW047_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**10-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW024_240416, 0861_MW035_240416, 0861_MW055S_240416, 0861_MW055D_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**10-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW033_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**10-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW006_240418, 0861_MW007_240418, 0861_MW023_240418, 0861_MW028_240418, 0861_MW029_240418, 0861_MW036_240418, 0861_MW044_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW053_240418, 0861_SW064_240418, 0861_SW079_240418, 0861_SW080_240418	**18-Apr-2024**	**10-May-2024**	15-Oct-2024	✓	**10-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X)							

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
EP231P: PFAS Sums - Continued							
0861_MW002_240419, 0861_MW022_240419, 0861_MW030_240419, 0861_MW031_240419, 0861_MW034_240419, 0861_MW042_240419, 0861_MW043_240419, 0861_MW048_240419, 0861_MW050_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**10-May-2024**	16-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW309_240415	**24-Apr-2024**	**10-May-2024**	21-Oct-2024	✓	**10-May-2024**	21-Oct-2024	✓

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	6	51	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	51	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	51	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	51	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	51	**5.88**	**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	77	**2.60**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	77	**5.19**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	77	**1.30**	**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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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	: **EB2413937**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 3
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 24-Apr-2024 17:13	Issue Date	: 26-Apr-2024
Client Requested Due Date	: 03-May-2024	Scheduled Reporting Date	: **03-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 5	Temperature	: 6.5/7.0/5.1°C - Ice present
Receipt Detail	: MEDIUM ESKY	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
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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 (30 analytes)
EB2413937-001	16-Apr-2024 00:00	0861_MW054S_240416	✓
EB2413937-002	16-Apr-2024 00:00	0861_MW054D_240416	✓

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]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

DERP ESDAT REPORTS

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- A4 - AU Tax Invoice (INV) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

CERTIFICATE OF ANALYSIS

Work Order	: **EB2413937**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024 17:13
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 07-May-2024 17:21
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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 tables in USEPA 1633 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: WATER (Matrix: WATER)			Sample ID	0861_MW054S_240416	0861_MW054D_240416	----	----	----
			Sampling date / time	16-Apr-2024 00:00	16-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EB2413937-001	EB2413937-002	--------	--------	--------
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
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	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	**0.09**	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.13**	<0.01	----	----	----
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	<0.02	<0.02	----	----	----
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	<0.01	----	----	----
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW054S_240416	0861_MW054D_240416	----	----	----
				Sampling date / time	16-Apr-2024 00:00	16-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413937-001	EB2413937-002	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.22**	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.22**	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.22**	<0.01	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**84.8**	**94.2**	----	----	----
13C8-PFOA	----	0.02	%		**93.7**	**96.0**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2413937**	Page	: 1 of 6
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 07-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 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]	Assistant Laboratory Manager	Brisbane Organics, Stafford, QLD

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: 5761100)									
EB2405070-020	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.59	0.52	12.8	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.73	1.51	13.6	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.08	0.07	19.9	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.04	0.03	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: 5761100)									
EB2405070-020	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	0.05	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.19	0.18	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	0.05	0.05	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	0.03	0.03	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.2	0.2	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5761100)									
EB2405070-020	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: 5761100) - continued									
EB2405070-020	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5761100)									
EB2405070-020	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

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5761100)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	111	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	111	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	103	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	93.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	113	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	96.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5761100)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	103	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	96.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	98.6	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.2	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	98.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	100	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	95.6	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	98.6	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	110	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	95.4	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5761100)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	100	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	99.1	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	92.1	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	100	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	97.4	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	103	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5761100)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5761100) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	98.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	128	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	104	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	91.3	64.2	133

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5761100)							
EB2405070-020	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	122	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	127	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	114	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	106	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	91.3	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5761100)							
EB2405070-020	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	118	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	108	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	113	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	106	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	110	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	111	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	110	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	109	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	97.8	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	121	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	110	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5761100)							
EB2405070-020	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	119	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	109	70.0	130

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: 5761100) - continued							
EB2405070-020	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	112	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	103	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	116	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	113	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5761100)							
EB2405070-020	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	110	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	108	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	84.1	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2413937**	Page	: 1 of 4
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 07-May-2024
Sampler	: AECOM	No. of samples received	: 2
Order number	: 60612563 3.1	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, 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	EB2405070--020	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: **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
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW054S_240416,	0861_MW054D_240416	**16-Apr-2024**	**03-May-2024**	13-Oct-2024	✓	**03-May-2024**	13-Oct-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW054S_240416,	0861_MW054D_240416	**16-Apr-2024**	**03-May-2024**	13-Oct-2024	✓	**03-May-2024**	13-Oct-2024	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
0861_MW054S_240416,	0861_MW054D_240416	**16-Apr-2024**	**03-May-2024**	13-Oct-2024	✓	**03-May-2024**	13-Oct-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW054S_240416,	0861_MW054D_240416	**16-Apr-2024**	**03-May-2024**	13-Oct-2024	✓	**03-May-2024**	13-Oct-2024	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
0861_MW054S_240416,	0861_MW054D_240416	**16-Apr-2024**	**03-May-2024**	13-Oct-2024	✓	**03-May-2024**	13-Oct-2024	✓

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	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	4	**25.00**	**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 LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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	: **EB2413946**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 4
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 24-Apr-2024 17:13	Issue Date	: 29-Apr-2024
Client Requested Due Date	: 07-May-2024	Scheduled Reporting Date	: **07-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 5	Temperature	: 6.5/7.0/5.1°C - Ice present
Receipt Detail	: MEDIUM ESKY	No. of samples received / analysed	: 16 / 16

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
- ***SRN Reissued DATE: As per the email from [redacted] on 29/04/2024 this work order has been amended to remove 'additional analysis' EB2413946-018 to the correct WO EB2413910 as requested.***
- ***SRN Reissued 29/04/2024: As per the email from [redacted] on 29/04/2024 this workorder has been amended due to misinterpreted logging on sample ID's #004, #006, #008, #010, #012, #014 & #016. Sample ID's have now been updated.***
- **Please be advised, extra containers without a label and a sampling time was received and added to the end of this workorder under "60612563 OMP AMBERLEY" (ALS #18). No analysis has been assigned to this sample. For further information regarding this adjustment, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- **Please be advised, no containers were received for sample "0861_MW056D_240416" (ALS #2) and has been removed from this workorder. For further information regarding this adjustment, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- **Please be advised, extra containers labelled "0861_MW056I_240416" (ALS #17) were received and added to the end of this workorder. Analysis has been assigned as listed on the Chain of Custody. For further information regarding this adjustment, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.

- **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.**

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)
EB2413946-004	12-Apr-2024 00:00	0861_SD025_240412	✓	✓
EB2413946-006	11-Apr-2024 00:00	0861_SD026_240411	✓	✓
EB2413946-008	12-Apr-2024 00:00	0861_SD039_240412	✓	✓
EB2413946-010	12-Apr-2024 00:00	0861_SD040_240412	✓	✓
EB2413946-012	11-Apr-2024 00:00	0861_SD043_240411	✓	✓
EB2413946-014	12-Apr-2024 00:00	0861_SD045_240412	✓	✓
EB2413946-016	12-Apr-2024 00:00	0861_SD098_240412	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (30 analytes)
EB2413946-001	16-Apr-2024 00:00	0861_MW056S_240416	✓
EB2413946-003	12-Apr-2024 00:00	0861_SW025_240412	✓
EB2413946-005	11-Apr-2024 00:00	0861_SW026_240411	✓
EB2413946-007	12-Apr-2024 00:00	0861_SW039_240412	✓
EB2413946-009	12-Apr-2024 00:00	0861_SW040_240412	✓
EB2413946-011	11-Apr-2024 00:00	0861_SW043_240411	✓
EB2413946-013	12-Apr-2024 00:00	0861_SW045_240412	✓
EB2413946-015	12-Apr-2024 00:00	0861_SW098_240412	✓
EB2413946-017	16-Apr-2024 00:00	0861_MW056I_240416	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS PAYABLE [redacted]

- A4 - AU Tax Invoice (INV) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- A4 - AU Tax Invoice (INV) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
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- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
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[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
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- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
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- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

CERTIFICATE OF ANALYSIS

Work Order	: **EB2413946**	Page	: 1 of 11
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024 17:13
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 09-May-2024 15:51
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 16		
No. of samples analysed	: 16		

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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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 PFAS: The LOR values of particular analytes have been raised for particular samples due to matrix interference.
- EP231X PFAS: Particular samples required dilution prior to analysis due to matrix interference. LOR values have been adjusted accordingly.
- EP231X PFAS: Sample '0861_SD026_240411' (EB2413946-006) have been diluted for particular analytes due to matrix interference. LOR values have been adjusted accordingly and matrix spike recoveries have not been determined.
- 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 tables in USEPA 1633 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.
- 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	0861_SD025_240412	0861_SD026_240411	0861_SD039_240412	0861_SD040_240412	0861_SD043_240411
				Sampling date / time	12-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413946-004	EB2413946-006	EB2413946-008	EB2413946-010	EB2413946-012
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**22.9**	**42.8**	**40.8**	**25.6**	**19.5**
EP231A: Perfluoroalkyl Sulfonic Acids									
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	<0.0002
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		<0.0002	**0.0075**	**0.0006**	**0.0021**	<0.0005
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0002	<0.0005
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	<0.0004	<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		<0.0002	<0.0002	<0.0005	<0.0002	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0002	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0002	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0005	<0.0007	<0.0002	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0013	<0.0005	<0.0012
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0005	<0.0002	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD025_240412	0861_SD026_240411	0861_SD039_240412	0861_SD040_240412	0861_SD043_240411
				Sampling date / time	12-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	11-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413946-004	EB2413946-006	EB2413946-008	EB2413946-010	EB2413946-012
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0013	<0.0013	<0.0005	<0.0012
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0013	<0.0013	<0.0005	<0.0012
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0013	<0.0005	<0.0012
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0013	<0.0005	<0.0012
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	<0.0005	<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		<0.0002	**0.0078**	**0.0006**	**0.0021**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	**0.0078**	**0.0006**	**0.0021**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	**0.0078**	**0.0006**	**0.0021**	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**100**	**100**	**140**	**92.5**	**140**
13C8-PFOA	----	0.0002	%		**114**	**102**	**106**	**101**	**90.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD045_240412	0861_SD098_240412	----	----	----
				Sampling date / time	12-Apr-2024 00:00	12-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413946-014	EB2413946-016	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**29.3**	**33.7**	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
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		**0.0043**	**0.0036**	----	----	----
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	<0.0004	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0005	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0005	<0.0002	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_SD045_240412	0861_SD098_240412	----	----	----
				Sampling date / time	12-Apr-2024 00:00	12-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413946-014	EB2413946-016	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0012	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0012	<0.0012	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0012	<0.0012	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0012	<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		**0.0045**	**0.0040**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0045**	**0.0038**	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0045**	**0.0040**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**108**	**95.0**	----	----	----
13C8-PFOA	----	0.0002	%		**110**	**92.0**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW056S_240416	0861_SW025_240412	0861_SW026_240411	0861_SW039_240412	0861_SW040_240412
				Sampling date / time	16-Apr-2024 00:00	12-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413946-001	EB2413946-003	EB2413946-005	EB2413946-007	EB2413946-009
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	<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		**0.01**	<0.01	**0.01**	<0.01	**0.01**
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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW056S_240416	0861_SW025_240412	0861_SW026_240411	0861_SW039_240412	0861_SW040_240412
				Sampling date / time	16-Apr-2024 00:00	12-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413946-001	EB2413946-003	EB2413946-005	EB2413946-007	EB2413946-009
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.01**	<0.01	**0.01**	<0.01	**0.01**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.01**	<0.01	**0.01**	<0.01	**0.01**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.01**	<0.01	**0.01**	<0.01	**0.01**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**116**	**98.0**	**126**	**91.6**	**96.3**
13C8-PFOA	----	0.02	%		**102**	**103**	**100**	**100**	**101**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	0861_SW043_240411	0861_SW045_240412	0861_SW098_240412	0861_MW056I_240416	----
			Sampling date / time	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	16-Apr-2024 00:00	----
Compound	CAS Number	LOR	Unit	EB2413946-011	EB2413946-013	EB2413946-015	EB2413946-017	--------
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<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	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.02	----
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	0.01	µg/L	<0.01	**0.01**	<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	0.1	µg/L	<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	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<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	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.02	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<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	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.06	----
EP231C: Perfluoroalkyl Sulfonamides								
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	0.05	µg/L	<0.05	<0.05	<0.05	<0.06	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_SW043_240411	0861_SW045_240412	0861_SW098_240412	0861_MW056I_240416	----
				Sampling date / time	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	16-Apr-2024 00:00	----
Compound	CAS Number	LOR	Unit		EB2413946-011	EB2413946-013	EB2413946-015	EB2413946-017	--------
					Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.06	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.06	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.06	----
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	0.02	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	0.05	µg/L		<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	----
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	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		<0.01	**0.01**	<0.01	<0.02	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**0.01**	<0.01	<0.02	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	**0.01**	<0.01	<0.02	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**86.7**	**97.0**	**92.1**	**92.9**	----
13C8-PFOA	----	0.02	%		**98.9**	**103**	**102**	**99.8**	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2413946**	Page	: 1 of 8
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 09-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 16		
No. of samples analysed	: 16		

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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
[redacted]	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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: 5754673)									
EB2413946-004	0861_SD025_240412	EA055: Moisture Content	----	0.1	%	22.9	22.9	0.0	0% - 20%
EB2413950-006	Anonymous	EA055: Moisture Content	----	0.1	%	27.7	29.9	7.6	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5754672)									
EB2413946-004	0861_SD025_240412	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	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EB2413950-006	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	0.0039	0.0033	15.2	0% - 50%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5754672)									
EB2413946-004	0861_SD025_240412	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

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: 5754672) - continued									
EB2413946-004	0861_SD025_240412	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
EB2413950-006	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 (0.0005)*	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002 (0.0005)*	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002 (0.0005)*	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002 (0.0005)*	mg/kg	<0.0005	<0.0005	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: 5754672)									
EB2413946-004	0861_SD025_240412	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
EB2413950-006	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

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: 5754672) - continued									
EB2413950-006	Anonymous	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 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5754672)									
EB2413946-004	0861_SD025_240412	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
EB2413950-006	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5754672)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	97.7	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	95.7	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	99.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	102	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	97.4	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	83.3	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5754672)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	94.9	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.8	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.8	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5754672)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.0	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.0	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.3	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.2	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5754672)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5754672) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	87.6	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	100	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	99.6	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	92.5	54.8	124

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	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5759719)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	91.5	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	94.2	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	86.2	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	72.7	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	92.7	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	79.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5759719)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	85.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	79.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	76.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	74.0	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	81.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	83.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	80.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	81.4	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	78.2	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	79.7	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5759719)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	88.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	71.5	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	66.8	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	85.8	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	79.4	62.6	138

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	Acceptable Limits (%): High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5759719) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	89.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	86.6	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5759719)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	84.3	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	101	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	98.8	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	84.8	64.2	133

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5754672)							
EB2413946-006	0861_SD026_240411	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	95.0	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	114	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	101	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	85.7	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	118	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	104	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5754672)							
EB2413946-006	0861_SD026_240411	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	88.2	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	96.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	94.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	94.0	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	98.8	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	98.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	92.0	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	# Not Determined	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	# Not Determined	66.0	139

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: 5754672) - continued							
EB2413946-006	0861_SD026_240411	EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	125	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5754672)							
EB2413946-006	0861_SD026_240411	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	107	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	78.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	75.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	75.2	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	# Not Determined	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5754672)							
EB2413946-006	0861_SD026_240411	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	# Not Determined	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	75.0	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	95.0	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2413946**	Page	: 1 of 7
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 09-May-2024
Sampler	: AECOM	No. of samples received	: 16
Order number	: 60612563 3.1	No. of samples analysed	: 16

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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP231S: PFAS Surrogate	EB2413946-008	0861_SD039_240412	**13C4-PFOS**	----	140 %	76.0-136 %	**Recovery greater than upper data quality objective**
EP231S: PFAS Surrogate	EB2413946-012	0861_SD043_240411	**13C4-PFOS**	----	140 %	76.0-136 %	**Recovery greater than upper data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar							
0861_SD026_240411,	0861_SD043_240411	----	----	----	29-Apr-2024	25-Apr-2024	**4**
HDPE Soil Jar							
0861_SD025_240412, 0861_SD040_240412, 0861_SD098_240412	0861_SD039_240412, 0861_SD045_240412,	----	----	----	29-Apr-2024	26-Apr-2024	**3**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	20	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	20	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: **SOIL**

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: **SOIL**

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
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0861_SD026_240411, 0861_SD043_240411	**11-Apr-2024**	**----**	----	----	**29-Apr-2024**	25-Apr-2024	×
HDPE Soil Jar (EA055) 0861_SD025_240412, 0861_SD039_240412, 0861_SD040_240412, 0861_SD045_240412, 0861_SD098_240412	**12-Apr-2024**	**----**	----	----	**29-Apr-2024**	26-Apr-2024	×
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD026_240411, 0861_SD043_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD025_240412, 0861_SD039_240412, 0861_SD040_240412, 0861_SD045_240412, 0861_SD098_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0861_SD026_240411, 0861_SD043_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD025_240412, 0861_SD039_240412, 0861_SD040_240412, 0861_SD045_240412, 0861_SD098_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0861_SD026_240411, 0861_SD043_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD025_240412, 0861_SD039_240412, 0861_SD040_240412, 0861_SD045_240412, 0861_SD098_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_SD026_240411, 0861_SD043_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD025_240412, 0861_SD039_240412, 0861_SD040_240412, 0861_SD045_240412, 0861_SD098_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0861_SD026_240411, 0861_SD043_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_SD025_240412, 0861_SD039_240412, 0861_SD040_240412, 0861_SD045_240412, 0861_SD098_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_SW026_240411, 0861_SW043_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW025_240412, 0861_SW039_240412, 0861_SW040_240412, 0861_SW045_240412, 0861_SW098_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_240416, 0861_MW056I_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0861_SW026_240411, 0861_SW043_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW025_240412, 0861_SW039_240412, 0861_SW040_240412, 0861_SW045_240412, 0861_SW098_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_240416, 0861_MW056I_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0861_SW026_240411, 0861_SW043_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW025_240412, 0861_SW039_240412, 0861_SW040_240412, 0861_SW045_240412, 0861_SW098_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_240416, 0861_MW056I_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_SW026_240411, 0861_SW043_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW025_240412, 0861_SW039_240412, 0861_SW040_240412, 0861_SW045_240412, 0861_SW098_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_240416, 0861_MW056I_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓

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
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0861_SW026_240411, 0861_SW043_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_SW025_240412, 0861_SW039_240412, 0861_SW040_240412, 0861_SW045_240412, 0861_SW098_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_MW056S_240416, 0861_MW056I_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓

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	18	**11.11**	**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	0	20	**0.00**	**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	0	20	**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
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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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	: **EB2413950**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 5
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 24-Apr-2024 17:13	Issue Date	: 29-Apr-2024
Client Requested Due Date	: 07-May-2024	Scheduled Reporting Date	: **07-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 5	Temperature	: 6.5/7.0/5.1°C - Ice present
Receipt Detail	: MEDIUM ESKY	No. of samples received / analysed	: 26 / 25

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
- ***SRN Reissued 29/04/2024: As per the email from [redacted] on 29/04/2024 this work order has been amended to add analysis to samples #019 & #021 for EP231X. Request to forward samples #020 and #022 to NMI for PFAS analysis. And amending sample IDs on #023 to #027.***
- ***SRN Reissued 29/04/2024: Samples #020 and #022 has been removed from WO per request to forward them to NMI.***
- **Please be advised, where no sampling date has been listed, ALS has assigned dates based on ID naming convention. If this is incorrect, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- **Please be advised, extra containers have been received labelled "0861_QC108_240417", "0861_QC208_240417", "0861_QC109_240418", "0861_QC209_240418" and "0861_RINSATE_240416" (ALS #19, 20, 21, 22 and 28). No analysis has been assigned to these samples. To add analysis to these samples, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- **Please be advised, the soil and water trip blanks have been added to this workorder and assigned analysis as per the requested analysis. For further information regarding this adjustment, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com.**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- **Samples have been forwarded to NMI, as requested. Please note that this will incur a freight forwarding fee.**
- 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.

- **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.**

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Any sample identifications that cannot be displayed entirely in the analysis summary table will be listed below.

EB2413950-023	: [05-Apr-2024]	: 0861_QC501_240405 - 020427
EB2413950-024	: [05-Apr-2024]	: 0861_QC502_240405 - 020428
EB2413950-025	: [05-Apr-2024]	: 0861_QC503_240405 - 020429
EB2413950-026	: [05-Apr-2024]	: 0861_QC504_240405 - 040251
EB2413950-027	: [05-Apr-2024]	: 0861_QC505_240405 - 040252

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)
EB2413950-003	09-Apr-2024 00:00	0861_QC101_240409	✓	✓
EB2413950-004	10-Apr-2024 00:00	0861_QC102_240410	✓	✓
EB2413950-005	11-Apr-2024 00:00	0861_QC103_240411	✓	✓
EB2413950-006	12-Apr-2024 00:00	0861_QC104_240412	✓	✓
EB2413950-007	12-Apr-2024 00:00	0861_QC105_240412	✓	✓
EB2413950-009	09-Apr-2024 00:00	0861_QC100_240409	✓	✓
EB2413950-026	05-Apr-2024 00:00	0861_QC504_240405 0...	✓	✓
EB2413950-027	05-Apr-2024 00:00	0861_QC505_240405 0...	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) WATER No analysis requested	WATER - EP231X PFAS - Full Suite (30 analytes)
EB2413950-001	15-Apr-2024 00:00	0861_QC106_240415		✓
EB2413950-002	16-Apr-2024 00:00	0861_QC107_240416		✓
EB2413950-008	09-Apr-2024 00:00	0861_QC100_240409		✓
EB2413950-010	09-Apr-2024 00:00	0861_QC101_240409		✓
EB2413950-011	10-Apr-2024 00:00	0861_QC102_240410		✓
EB2413950-012	11-Apr-2024 00:00	0861_QC103_240411		✓
EB2413950-013	12-Apr-2024 00:00	0861_QC104_240412		✓
EB2413950-014	12-Apr-2024 00:00	0861_QC105_240412		✓
EB2413950-015	16-Apr-2024 00:00	0861_QC405_240416		✓
EB2413950-016	17-Apr-2024 00:00	0861_QC406_240417		✓

			(On Hold) WATER No analysis requested	WATER - EP231X PFAS - Full Suite (30 analytes)
EB2413950-017	18-Apr-2024 00:00	0861_QC407_240418		✓
EB2413950-018	19-Apr-2024 00:00	0861_QC408_240419		✓
EB2413950-019	17-Apr-2024 00:00	0861_QC108_240417		✓
EB2413950-021	18-Apr-2024 00:00	0861_QC109_240418		✓
EB2413950-023	05-Apr-2024 00:00	0861_QC501_240405 0...		✓
EB2413950-024	05-Apr-2024 00:00	0861_QC502_240405 0...		✓
EB2413950-025	05-Apr-2024 00:00	0861_QC503_240405 0...		✓
EB2413950-028	16-Apr-2024 00:00	0861_RINSATE_240416	✓	

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
				Date	Evaluation	Date	Evaluation
EA055: Moisture Content							
0861_QC100_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	✘	----	----
0861_QC101_240409	HDPE Soil Jar	----	23-Apr-2024	24-Apr-2024	✘	----	----
0861_QC504_240405	HDPE Soil Jar	----	19-Apr-2024	24-Apr-2024	✘	----	----
0861_QC505_240405	HDPE Soil Jar	----	19-Apr-2024	24-Apr-2024	✘	----	----

Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	[redacted]
[redacted]		
- *AU Certificate of Analysis - NATA (COA)	Email	
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	
- A4 - AU Tax Invoice (INV)	Email	
- Chain of Custody (CoC) (COC)	Email	
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	
- EDI Format - ESDAT (ESDAT)	Email	
[redacted]		
- *AU Certificate of Analysis - NATA (COA)	Email	
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	
- Chain of Custody (CoC) (COC)	Email	
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	
- EDI Format - ESDAT (ESDAT)	Email	
[redacted]		
- *AU Certificate of Analysis - NATA (COA)	Email	
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	
- Chain of Custody (CoC) (COC)	Email	
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	
- EDI Format - ESDAT (ESDAT)	Email	
[redacted]		
- *AU Certificate of Analysis - NATA (COA)	Email	
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	
- A4 - AU Tax Invoice (INV)	Email	
- Chain of Custody (CoC) (COC)	Email	
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	
- EDI Format - ESDAT (ESDAT)	Email	
[redacted]		
- *AU Certificate of Analysis - NATA (COA)	Email	
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	
- Chain of Custody (CoC) (COC)	Email	
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	
- EDI Format - ESDAT (ESDAT)	Email	

CERTIFICATE OF ANALYSIS

Work Order	: **EB2413950**	Page	: 1 of 17
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: [redacted]
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: +61 7 3552 8616
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024 17:13
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 10-May-2024 13:02
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 26		
No. of samples analysed	: 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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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 PFAS: The LOR values of particular analytes have been raised for particular samples due to matrix interference.
- EP231X PFAS: Particular samples required dilution prior to analysis due to matrix interference. LOR values have been adjusted accordingly.
- 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 tables in USEPA 1633 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.
- 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	0861_QC101_240409	0861_QC102_240410	0861_QC103_240411	0861_QC104_240412	0861_QC105_240412
				Sampling date / time	09-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-003	EB2413950-004	EB2413950-005	EB2413950-006	EB2413950-007
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**45.6**	**55.6**	**42.2**	**27.7**	**22.8**
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	**0.0003**	<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	**0.0036**	**0.0002**	**0.0002**	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0004	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0034**	**0.0939**	**0.0075**	**0.0039**	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0004	<0.0004	<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	<0.0008	<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		<0.0002	**0.0005**	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0004	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0005	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0010	<0.0002	<0.0005	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0010	<0.0010	<0.0005	<0.0005	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0005	<0.0010	<0.0005	<0.0005	<0.0002
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	<0.0010	<0.0002	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_QC101_240409	0861_QC102_240410	0861_QC103_240411	0861_QC104_240412	0861_QC105_240412
				Sampling date / time	09-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-003	EB2413950-004	EB2413950-005	EB2413950-006	EB2413950-007
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0012	<0.0025	<0.0012	<0.0012	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0012	<0.0025	<0.0012	<0.0012	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0012	<0.0025	<0.0012	<0.0012	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0012	<0.0025	<0.0012	<0.0012	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0010	<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		**0.0034**	**0.0983**	**0.0077**	**0.0041**	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0034**	**0.0975**	**0.0077**	**0.0041**	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0034**	**0.0983**	**0.0077**	**0.0041**	<0.0002
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**90.5**	**170**	**104**	**84.0**	**93.5**
13C8-PFOA	----	0.0002	%		**96.5**	**112**	**90.0**	**84.5**	**91.0**

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_QC100_240409	----	----	----	----
				Sampling date / time	09-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2413950-009	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**44.8**	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
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		**0.0005**	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0145**	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		**0.0004**	----	----	----	----
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0861_QC100_240409	----	----	----	----
				Sampling date / time	09-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EB2413950-009	--------	--------	--------	--------
					Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.0154**	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0150**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0150**	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**106**	----	----	----	----
13C8-PFOA	----	0.0002	%		**98.0**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_QC504_240405 040251	0861_QC505_240405 040252	----	----	----
				Sampling date / time	05-Apr-2024 00:00	05-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413950-026	EB2413950-027	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**0.3**	**0.2**	**----**	**----**	**----**
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.0002	<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 (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_QC504_240405 040251	0861_QC505_240405 040252	----	----	----
				Sampling date / time	05-Apr-2024 00:00	05-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413950-026	EB2413950-027	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.0002	<0.0002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**92.0**	**87.0**	----	----	----
13C8-PFOA	----	0.0002	%		**98.5**	**88.0**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC106_240415	0861_QC107_240416	0861_QC100_240409	0861_QC101_240409	0861_QC102_240410
				Sampling date / time	15-Apr-2024 00:00	16-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-001	EB2413950-002	EB2413950-008	EB2413950-010	EB2413950-011
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**2.60**	<0.02	<0.02	<0.02	**0.08**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**2.48**	<0.02	<0.02	<0.02	**0.05**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**8.18**	<0.01	**0.02**	<0.01	**0.30**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		**0.09**	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.73**	**0.01**	**0.02**	**0.01**	**0.92**
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		**0.39**	<0.02	<0.02	<0.02	**0.05**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**1.97**	<0.02	<0.02	<0.02	**0.12**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.22**	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.13**	<0.01	<0.01	<0.01	**0.04**
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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC106_240415	0861_QC107_240416	0861_QC100_240409	0861_QC101_240409	0861_QC102_240410
				Sampling date / time	15-Apr-2024 00:00	16-Apr-2024 00:00	09-Apr-2024 00:00	09-Apr-2024 00:00	10-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-001	EB2413950-002	EB2413950-008	EB2413950-010	EB2413950-011
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**17.1**	**0.01**	**0.04**	**0.01**	**1.56**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**8.91**	**0.01**	**0.04**	**0.01**	**1.22**
Sum of PFAS (WA DER List)	----	0.01	µg/L		**14.5**	**0.01**	**0.04**	**0.01**	**1.51**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**99.5**	**87.3**	**85.4**	**92.4**	**94.8**
13C8-PFOA	----	0.02	%		**100**	**98.5**	**96.8**	**97.3**	**100**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC103_240411	0861_QC104_240412	0861_QC105_240412	0861_QC405_240416	0861_QC406_240417
				Sampling date / time	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	16-Apr-2024 00:00	17-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-012	EB2413950-013	EB2413950-014	EB2413950-015	EB2413950-016
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	<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		**0.02**	**0.01**	<0.01	<0.01	<0.01
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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC103_240411	0861_QC104_240412	0861_QC105_240412	0861_QC405_240416	0861_QC406_240417
				Sampling date / time	11-Apr-2024 00:00	12-Apr-2024 00:00	12-Apr-2024 00:00	16-Apr-2024 00:00	17-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-012	EB2413950-013	EB2413950-014	EB2413950-015	EB2413950-016
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.02**	**0.01**	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.02**	**0.01**	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.02**	**0.01**	<0.01	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**96.6**	**95.8**	**110**	**103**	**92.0**
13C8-PFOA	----	0.02	%		**99.6**	**96.9**	**98.9**	**97.1**	**98.1**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC407_240418	0861_QC408_240419	0861_QC108_240417	0861_QC109_240418	0861_QC501_240405 020427
				Sampling date / time	18-Apr-2024 00:00	19-Apr-2024 00:00	17-Apr-2024 00:00	18-Apr-2024 00:00	05-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-017	EB2413950-018	EB2413950-019	EB2413950-021	EB2413950-023
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	<0.02	**0.71**	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	<0.02	<0.02	**0.73**	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	<0.01	**3.94**	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	<0.02	**0.30**	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	**3.82**	<0.01
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	**0.16**	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	<0.02	**0.82**	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	<0.02	**0.12**	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	**0.18**	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC407_240418	0861_QC408_240419	0861_QC108_240417	0861_QC109_240418	0861_QC501_240405 020427
				Sampling date / time	18-Apr-2024 00:00	19-Apr-2024 00:00	17-Apr-2024 00:00	18-Apr-2024 00:00	05-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413950-017	EB2413950-018	EB2413950-019	EB2413950-021	EB2413950-023
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	**0.17**	<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		<0.01	<0.01	**0.17**	**10.9**	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	**7.76**	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	**0.17**	**9.85**	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**95.8**	**100**	**89.9**	**88.4**	**102**
13C8-PFOA	----	0.02	%		**97.6**	**95.8**	**92.5**	**93.4**	**99.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC502_240405 020428	0861_QC503_240405 020429	----	----	----
				Sampling date / time	05-Apr-2024 00:00	05-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413950-024	EB2413950-025	--------	--------	--------
					Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.02	<0.02	----	----	----
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	0.01	µg/L		<0.01	<0.01	----	----	----
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		<0.02	<0.02	----	----	----
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	<0.01	----	----	----
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC502_240405020428	0861_QC503_240405020429	----	----	----
				Sampling date / time	05-Apr-2024 00:00	05-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2413950-024	EB2413950-025	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	----	----	----
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)	----	0.01	µg/L		<0.01	<0.01	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**88.5**	**80.1**	----	----	----
13C8-PFOA	----	0.02	%		**99.0**	**100**	----	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2413950**	Page	: 1 of 11
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 26		
No. of samples analysed	: 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 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 Inorganic Chemist	Brisbane Soil Preparation, Stafford, QLD
[redacted]	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD

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: 5754673)									
EB2413946-004	Anonymous	EA055: Moisture Content	----	0.1	%	22.9	22.9	0.0	0% - 20%
EB2413950-006	0861_QC104_240412	EA055: Moisture Content	----	0.1	%	27.7	29.9	7.6	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5754672)									
EB2413946-004	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	<0.0002	<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
EB2413950-006	0861_QC104_240412	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	0.0039	0.0033	15.2	0% - 50%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5754672)									
EB2413946-004	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	<0.0002	<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

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: 5754672) - continued									
EB2413946-004	Anonymous	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
EB2413950-006	0861_QC104_240412	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 (0.0005)*	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002 (0.0005)*	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002 (0.0005)*	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002 (0.0005)*	mg/kg	<0.0005	<0.0005	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: 5754672)									
EB2413946-004	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
EB2413950-006	0861_QC104_240412	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 sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5754672) - continued									
EB2413950-006	0861_QC104_240412	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 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0012)*	mg/kg	<0.0012	<0.0012	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5754672)									
EB2413946-004	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	<0.0005	<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
EB2413950-006	0861_QC104_240412	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 sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5771279)									
EB2414024-009	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: 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: 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: 5771279)									
EB2414024-009	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

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: 5771279) - continued									
EB2414024-009	Anonymous	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5771279)									
EB2414024-009	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: 5771279)									
EB2414024-009	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

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5754672)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	97.7	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	95.7	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	99.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	102	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	97.4	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	83.3	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5754672)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	94.9	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.8	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.8	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5754672)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.0	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.0	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.3	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.2	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5754672)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5754672) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	87.6	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	100	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	99.6	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	92.5	54.8	124

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	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5759719)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	91.5	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	94.2	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	86.2	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	72.7	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	92.7	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	79.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5765447)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	101	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	107	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	106	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	89.3	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	97.2	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	75.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5771279)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	85.2	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	92.0	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	76.7	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	92.4	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	77.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5759719)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	85.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	79.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	76.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	74.0	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	81.0	71.0	133

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	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5759719) - continued								
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	83.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	80.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	81.4	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	78.2	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	79.7	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5765447)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	83.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	85.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	80.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	88.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	91.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	87.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	84.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	88.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	94.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	89.5	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5771279)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	88.5	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	81.8	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	83.6	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	78.0	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	80.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	84.2	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	81.2	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	78.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	75.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	91.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	92.7	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5759719)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	88.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	71.5	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	66.8	60.5	138

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5759719) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	85.8	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	79.4	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	89.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	86.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5765447)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	94.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	104	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	83.9	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	94.8	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	90.9	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	86.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	77.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5771279)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	89.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	75.2	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	80.2	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	78.6	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	88.9	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	92.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	83.4	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5759719)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	84.3	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	101	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	98.8	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	84.8	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5765447)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5765447) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	107	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	105	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	129	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	112	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5771279)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	92.4	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	89.6	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	102	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	89.0	64.2	133

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5754672)							
EB2413946-006	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	95.0	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	114	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	101	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	85.7	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	118	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	104	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5754672)							
EB2413946-006	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	88.2	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	96.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	94.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	94.0	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	98.8	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	98.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	92.0	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	# Not Determined	69.0	135

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: 5754672) - continued							
EB2413946-006	Anonymous	EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	# Not Determined	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	125	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5754672)							
EB2413946-006	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	107	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	78.2	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	75.3	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	75.2	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	# Not Determined	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5754672)							
EB2413946-006	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	# Not Determined	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	75.0	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	95.0	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2413950**	Page	: 1 of 11
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM	No. of samples received	: 26
Order number	: 60612563 3.1	No. of samples analysed	: 25

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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Regular Sample Surrogates

Sub-Matrix: **SEDIMENT**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP231S: PFAS Surrogate	EB2413950-004	0861_QC102_240410	**13C4-PFOS**	----	170 %	76.0-136 %	**Recovery greater than upper data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar							
0861_QC504_240405 - 040251,	0861_QC505_240405 - 040252	----	----	----	29-Apr-2024	19-Apr-2024	**10**
HDPE Soil Jar							
0861_QC101_240409,	0861_QC100_240409	----	----	----	29-Apr-2024	23-Apr-2024	**6**
HDPE Soil Jar							
0861_QC102_240410		----	----	----	29-Apr-2024	24-Apr-2024	**5**
HDPE Soil Jar							
0861_QC103_240411		----	----	----	29-Apr-2024	25-Apr-2024	**4**
HDPE Soil Jar							
0861_QC104_240412,	0861_QC105_240412	----	----	----	29-Apr-2024	26-Apr-2024	**3**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count: QC	Count: Regular	Rate (%): Actual	Rate (%): Expected	Quality Control Specification
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	50	2.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	50	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: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation

Matrix: **SOIL**

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
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0861_QC504_240405 - 040251, 0861_QC505_240405 - 040252	**05-Apr-2024**	**----**	----	----	**29-Apr-2024**	19-Apr-2024	×
HDPE Soil Jar (EA055) 0861_QC101_240409, 0861_QC100_240409	**09-Apr-2024**	**----**	----	----	**29-Apr-2024**	23-Apr-2024	×
HDPE Soil Jar (EA055) 0861_QC102_240410	**10-Apr-2024**	**----**	----	----	**29-Apr-2024**	24-Apr-2024	×
HDPE Soil Jar (EA055) 0861_QC103_240411	**11-Apr-2024**	**----**	----	----	**29-Apr-2024**	25-Apr-2024	×
HDPE Soil Jar (EA055) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**----**	----	----	**29-Apr-2024**	26-Apr-2024	×
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_QC504_240405 - 040251, 0861_QC505_240405 - 040252	**05-Apr-2024**	**30-Apr-2024**	02-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC101_240409, 0861_QC100_240409	**09-Apr-2024**	**30-Apr-2024**	06-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC102_240410	**10-Apr-2024**	**30-Apr-2024**	07-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC103_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0861_QC504_240405 - 040251, 0861_QC505_240405 - 040252	**05-Apr-2024**	**30-Apr-2024**	02-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC101_240409, 0861_QC100_240409	**09-Apr-2024**	**30-Apr-2024**	06-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC102_240410	**10-Apr-2024**	**30-Apr-2024**	07-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC103_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0861_QC504_240405 - 040251, 0861_QC505_240405 - 040252	**05-Apr-2024**	**30-Apr-2024**	02-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC101_240409, 0861_QC100_240409	**09-Apr-2024**	**30-Apr-2024**	06-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC102_240410	**10-Apr-2024**	**30-Apr-2024**	07-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC103_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓

Matrix: **SOIL**

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_QC504_240405 - 040251, 0861_QC505_240405 - 040252	**05-Apr-2024**	**30-Apr-2024**	02-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC101_240409, 0861_QC100_240409	**09-Apr-2024**	**30-Apr-2024**	06-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC102_240410	**10-Apr-2024**	**30-Apr-2024**	07-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC103_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0861_QC504_240405 - 040251, 0861_QC505_240405 - 040252	**05-Apr-2024**	**30-Apr-2024**	02-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC101_240409, 0861_QC100_240409	**09-Apr-2024**	**30-Apr-2024**	06-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC102_240410	**10-Apr-2024**	**30-Apr-2024**	07-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC103_240411	**11-Apr-2024**	**30-Apr-2024**	08-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓
HDPE Soil Jar (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**30-Apr-2024**	09-Oct-2024	✓	**03-May-2024**	09-Jun-2024	✓

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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_QC501_240405 - 020427, 0861_QC502_240405 - 020428, 0861_QC503_240405 - 020429	**05-Apr-2024**	**08-May-2024**	02-Oct-2024	✓	**08-May-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC100_240409, 0861_QC101_240409	**09-Apr-2024**	**07-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC102_240410	**10-Apr-2024**	**07-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC103_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC106_240415	**15-Apr-2024**	**07-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC107_240416, 0861_QC405_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC406_240417	**17-Apr-2024**	**07-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC108_240417	**17-Apr-2024**	**08-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC407_240418, 0861_QC109_240418	**18-Apr-2024**	**08-May-2024**	15-Oct-2024	✓	**08-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC408_240419	**19-Apr-2024**	**08-May-2024**	16-Oct-2024	✓	**08-May-2024**	16-Oct-2024	✓

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0861_QC501_240405 - 020427, 0861_QC502_240405 - 020428, 0861_QC503_240405 - 020429	**05-Apr-2024**	**08-May-2024**	02-Oct-2024	✓	**08-May-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC100_240409, 0861_QC101_240409	**09-Apr-2024**	**07-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC102_240410	**10-Apr-2024**	**07-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC103_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC106_240415	**15-Apr-2024**	**07-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC107_240416, 0861_QC405_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC406_240417	**17-Apr-2024**	**07-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC108_240417	**17-Apr-2024**	**08-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC407_240418, 0861_QC109_240418	**18-Apr-2024**	**08-May-2024**	15-Oct-2024	✓	**08-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC408_240419	**19-Apr-2024**	**08-May-2024**	16-Oct-2024	✓	**08-May-2024**	16-Oct-2024	✓

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0861_QC501_240405 - 020427, 0861_QC502_240405 - 020428, 0861_QC503_240405 - 020429	**05-Apr-2024**	**08-May-2024**	02-Oct-2024	✓	**08-May-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC100_240409, 0861_QC101_240409	**09-Apr-2024**	**07-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC102_240410	**10-Apr-2024**	**07-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC103_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC106_240415	**15-Apr-2024**	**07-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC107_240416, 0861_QC405_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC406_240417	**17-Apr-2024**	**07-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC108_240417	**17-Apr-2024**	**08-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC407_240418, 0861_QC109_240418	**18-Apr-2024**	**08-May-2024**	15-Oct-2024	✓	**08-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC408_240419	**19-Apr-2024**	**08-May-2024**	16-Oct-2024	✓	**08-May-2024**	16-Oct-2024	✓

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_QC501_240405 - 020427, 0861_QC502_240405 - 020428, 0861_QC503_240405 - 020429	**05-Apr-2024**	**08-May-2024**	02-Oct-2024	✓	**08-May-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC100_240409, 0861_QC101_240409	**09-Apr-2024**	**07-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC102_240410	**10-Apr-2024**	**07-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC103_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC106_240415	**15-Apr-2024**	**07-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC107_240416, 0861_QC405_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC406_240417	**17-Apr-2024**	**07-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC108_240417	**17-Apr-2024**	**08-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC407_240418, 0861_QC109_240418	**18-Apr-2024**	**08-May-2024**	15-Oct-2024	✓	**08-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC408_240419	**19-Apr-2024**	**08-May-2024**	16-Oct-2024	✓	**08-May-2024**	16-Oct-2024	✓

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
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0861_QC501_240405 - 020427, 0861_QC502_240405 - 020428, 0861_QC503_240405 - 020429	**05-Apr-2024**	**08-May-2024**	02-Oct-2024	✓	**08-May-2024**	02-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC100_240409, 0861_QC101_240409	**09-Apr-2024**	**07-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC102_240410	**10-Apr-2024**	**07-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC103_240411	**11-Apr-2024**	**07-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC104_240412, 0861_QC105_240412	**12-Apr-2024**	**07-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC106_240415	**15-Apr-2024**	**07-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC107_240416, 0861_QC405_240416	**16-Apr-2024**	**07-May-2024**	13-Oct-2024	✓	**08-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC406_240417	**17-Apr-2024**	**07-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC108_240417	**17-Apr-2024**	**08-May-2024**	14-Oct-2024	✓	**08-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC407_240418, 0861_QC109_240418	**18-Apr-2024**	**08-May-2024**	15-Oct-2024	✓	**08-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC408_240419	**19-Apr-2024**	**08-May-2024**	16-Oct-2024	✓	**08-May-2024**	16-Oct-2024	✓

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	18	11.11	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	1	50	2.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	50	6.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	50	6.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	50	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
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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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	: **EB2413951**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 3
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 24-Apr-2024 17:13	Issue Date	: 26-Apr-2024
Client Requested Due Date	: 07-May-2024	Scheduled Reporting Date	: **07-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 6.5/7.0/5.1°C - Ice present
Receipt Detail	: MEDIUM ESKY	No. of samples received / analysed	: 14 / 14

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
- EP231: ALS requires 20ml of sample to analyse water samples for EP231X. Where larger volume bottles have been submitted analysis has been re-logged for direct injection (EP231-INJ) as a whole bottle extraction with solvent rinsing cannot be performed.
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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 (30 analytes)	WATER - EP231X-INJ PFAS - Full Suite (31 analytes)
EB2413951-001	09-Apr-2024 00:00	0861_QC300_240409		✓
EB2413951-002	10-Apr-2024 00:00	0861_QC301_240410		✓
EB2413951-003	11-Apr-2024 00:00	0861_QC302_240411		✓
EB2413951-004	12-Apr-2024 00:00	0861_QC303_240412		✓
EB2413951-005	15-Apr-2024 00:00	0861_QC304_240415		✓
EB2413951-006	16-Apr-2024 00:00	0861_QC305_240416		✓
EB2413951-007	17-Apr-2024 00:00	0861_QC306_240417		✓
EB2413951-008	18-Apr-2024 00:00	0861_QC307_240418		✓
EB2413951-009	19-Apr-2024 00:00	0861_QC308_240419		✓
EB2413951-010	09-Apr-2024 00:00	0861_QC400_240409	✓	
EB2413951-011	10-Apr-2024 00:00	0861_QC401_240410	✓	
EB2413951-012	11-Apr-2024 00:00	0861_QC402_240411	✓	
EB2413951-013	12-Apr-2024 00:00	0861_QC403_240412	✓	
EB2413951-014	15-Apr-2024 00:00	0861_QC404_240415	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

[redacted]

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- A4 - AU Tax Invoice (INV) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
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- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
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- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
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- EDI Format - ESDAT (ESDAT) Email

[redacted]

- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

CERTIFICATE OF ANALYSIS

Work Order	: **EB2413951**	Page	: 1 of 11
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: + [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024 17:13
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 10-May-2024 16:10
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 14		
No. of samples analysed	: 14		

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 - Organics	Brisbane Organics, Stafford, QLD

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: ALS requires 20ml of sample to analyse water samples for EP231X. Where larger volume bottles have been submitted analysis has been re-logged for direct injection (EP231-INJ) as a whole bottle extraction with solvent rinsing cannot be performed.
- 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-INJ: High surrogate recoveries deemed acceptable as all associated analyte results are less than LOR.
- 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 tables in USEPA 1633 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.
- EP231X-INJ: The direct injection LCMSMS method may be used where the sample matrix is not suitable for Solid Phase Extraction (e.g. significant particulate load) or where only a single sample container is received.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC300_240409	0861_QC301_240410	0861_QC302_240411	0861_QC303_240412	0861_QC304_240415
				Sampling date / time	09-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	15-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413951-001	EB2413951-002	EB2413951-003	EB2413951-004	EB2413951-005
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
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		<0.01	<0.01	<0.01	<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		<0.01	<0.01	<0.01	<0.01	<0.01
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	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	<0.10
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		<0.02	<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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC300_240409	0861_QC301_240410	0861_QC302_240411	0861_QC303_240412	0861_QC304_240415
				Sampling date / time	09-Apr-2024 00:00	10-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	15-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413951-001	EB2413951-002	EB2413951-003	EB2413951-004	EB2413951-005
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**86.3**	**106**	**116**	**111**	**99.6**
13C8-PFOA	----	0.02	%		**79.9**	**99.5**	**114**	**106**	**96.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC305_240416	0861_QC306_240417	0861_QC307_240418	0861_QC308_240419	0861_QC400_240409
				Sampling date / time	16-Apr-2024 00:00	17-Apr-2024 00:00	18-Apr-2024 00:00	19-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413951-006	EB2413951-007	EB2413951-008	EB2413951-009	EB2413951-010
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<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	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
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	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	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
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		----	----	----	----	<0.01
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		----	----	----	----	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<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	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<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	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC305_240416	0861_QC306_240417	0861_QC307_240418	0861_QC308_240419	0861_QC400_240409
				Sampling date / time	16-Apr-2024 00:00	17-Apr-2024 00:00	18-Apr-2024 00:00	19-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413951-006	EB2413951-007	EB2413951-008	EB2413951-009	EB2413951-010
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<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	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
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
EP231C: Perfluoroalkyl Sulfonamides									
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	0.05	µg/L		<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	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC305_240416	0861_QC306_240417	0861_QC307_240418	0861_QC308_240419	0861_QC400_240409
				Sampling date / time	16-Apr-2024 00:00	17-Apr-2024 00:00	18-Apr-2024 00:00	19-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413951-006	EB2413951-007	EB2413951-008	EB2413951-009	EB2413951-010
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	0.02	µg/L		<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	----
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	<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	----
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	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		----	----	----	----	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC305_240416	0861_QC306_240417	0861_QC307_240418	0861_QC308_240419	0861_QC400_240409
				Sampling date / time	16-Apr-2024 00:00	17-Apr-2024 00:00	18-Apr-2024 00:00	19-Apr-2024 00:00	09-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		EB2413951-006	EB2413951-007	EB2413951-008	EB2413951-009	EB2413951-010
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
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		<0.01	<0.01	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS	----	0.01	µg/L		----	----	----	----	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		----	----	----	----	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L		----	----	----	----	<0.01
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		----	----	----	----	**116**
13C4-PFOS	----	0.02	%		**116**	**179**	**105**	**92.9**	----
13C8-PFOA	----	0.02	%		----	----	----	----	**102**
13C8-PFOA	----	0.02	%		**101**	**161**	**102**	**99.2**	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC401_240410	0861_QC402_240411	0861_QC403_240412	0861_QC404_240415	----
				Sampling date / time	10-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	15-Apr-2024 00:00	----
Compound	CAS Number	LOR	Unit		EB2413951-011	EB2413951-012	EB2413951-013	EB2413951-014	--------
					Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<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	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
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	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
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	0.1	µg/L		<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	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<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	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<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	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<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	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L		<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	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC401_240410	0861_QC402_240411	0861_QC403_240412	0861_QC404_240415	----
				Sampling date / time	10-Apr-2024 00:00	11-Apr-2024 00:00	12-Apr-2024 00:00	15-Apr-2024 00:00	----
Compound	CAS Number	LOR	Unit		EB2413951-011	EB2413951-012	EB2413951-013	EB2413951-014	--------
					Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	0.05	µg/L		<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	----
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	0.02	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	0.05	µg/L		<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	----
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	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**96.6**	**91.8**	**109**	**102**	----
13C8-PFOA	----	0.02	%		**103**	**99.4**	**95.9**	**98.9**	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	***Low***	***High***
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2413951**	Page	: 1 of 9
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 27-Apr-2024
C-O-C number	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 V3		
No. of samples received	: 14		
No. of samples analysed	: 14		

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 - Organics	Brisbane Organics, Stafford, QLD

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: 5761018)									
EB2413756-001	Anonymous	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
EB2413951-007	0861_QC306_240417	EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	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 (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5761018) - continued									
EB2413951-007	0861_QC306_240417	EP231X-INJ: 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: 5761018)									
EB2413756-001	Anonymous	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05 (0.25)*	µg/L	<0.25	<0.25	0.0	No Limit
		EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1 (0.50)*	µg/L	<0.50	<0.50	0.0	No Limit
EB2413951-007	0861_QC306_240417	EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	<0.10	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5761018)									
EB2413756-001	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05 (0.25)*	µg/L	<0.25	<0.25	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05 (0.25)*	µg/L	<0.25	<0.25	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: 5761018) - continued									
EB2413756-001	Anonymous	EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05 (0.25)*	µg/L	<0.25	<0.25	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05 (0.25)*	µg/L	<0.25	<0.25	0.0	No Limit
EB2413951-007	0861_QC306_240417	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 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: 5761018)									
EB2413756-001	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
EB2413951-007	0861_QC306_240417	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X-INJ: 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: 5761018)									
EB2413756-001	Anonymous	EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
		EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
EB2413951-007	0861_QC306_240417	EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	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 (%)*
EP231P: PFAS Sums (QC Lot: 5761018) - continued									
EB2413951-007	0861_QC306_240417	EP231X-INJ: Sum of PFAS (WA DER List)	----	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5761018)								
EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.444 µg/L	100	72.0	130
EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.47 µg/L	111	71.0	127
EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.475 µg/L	106	68.0	131
EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.477 µg/L	118	69.0	134
EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.4646 µg/L	105	65.0	140
EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.5 µg/L	98.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5765447)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	101	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	107	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	106	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	89.3	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	97.2	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	75.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5761018)								
EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.10	2.5 µg/L	104	73.0	129
EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.5 µg/L	104	72.0	129
EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.5 µg/L	99.6	72.0	129
EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.5 µg/L	97.8	72.0	130
EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.5 µg/L	97.6	71.0	133
EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.5 µg/L	94.4	69.0	130
EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.5 µg/L	102	71.0	129
EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.5 µg/L	112	69.0	133
EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.5 µg/L	113	72.0	134
EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.5 µg/L	116	65.0	144
EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	1.25 µg/L	126	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5765447)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	83.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	85.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	80.2	72.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5765447) - continued								
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	88.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	91.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	87.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	84.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	88.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	94.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	89.5	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5761018)								
EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.5 µg/L	99.0	67.0	137
EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	1.25 µg/L	118	68.0	141
EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	1.25 µg/L	97.6	62.1	136
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	1.25 µg/L	104	65.2	135
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	1.25 µg/L	92.8	63.2	135
EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.5 µg/L	125	65.0	136
EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.5 µg/L	95.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5765447)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	94.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	104	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	83.9	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	94.8	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	90.9	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	86.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	77.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5761018)								
EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.469 µg/L	117	63.0	143
EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.476 µg/L	110	64.0	140
EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.48 µg/L	110	67.0	138
EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.483 µg/L	105	62.2	139

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5765447)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	107	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	105	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	129	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	112	64.2	133
EP231P: PFAS Sums (QCLot: 5761018)								
EP231X-INJ: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X-INJ: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5761018)							
EB2413756-002	Anonymous	EP231X-INJ: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.443 µg/L	104	70.0	130
		EP231X-INJ: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.47 µg/L	109	70.0	130
		EP231X-INJ: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.475 µg/L	106	70.0	130
		EP231X-INJ: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.477 µg/L	108	70.0	130
		EP231X-INJ: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.5 µg/L	95.0	70.0	130
		EP231X-INJ: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.482 µg/L	94.4	70.0	130
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5761018)							
EB2413756-002	Anonymous	EP231X-INJ: Perfluorobutanoic acid (PFBA)	375-22-4	2.5 µg/L	106	70.0	130
		EP231X-INJ: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.5 µg/L	107	70.0	130
		EP231X-INJ: Perfluorohexanoic acid (PFHxA)	307-24-4	0.5 µg/L	104	70.0	130
		EP231X-INJ: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.5 µg/L	104	70.0	130
		EP231X-INJ: Perfluorooctanoic acid (PFOA)	335-67-1	0.5 µg/L	101	70.0	130
		EP231X-INJ: Perfluorononanoic acid (PFNA)	375-95-1	0.5 µg/L	115	70.0	130
		EP231X-INJ: Perfluorodecanoic acid (PFDA)	335-76-2	0.5 µg/L	111	70.0	130
		EP231X-INJ: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.5 µg/L	103	70.0	130
		EP231X-INJ: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.5 µg/L	107	70.0	130
		EP231X-INJ: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5 µg/L	111	70.0	130
		EP231X-INJ: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.25 µg/L	126	70.0	130
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5761018)							

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: 5761018) - continued							
EB2413756-002	Anonymous	EP231X-INJ: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.5 µg/L	103	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	1.25 µg/L	114	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	1.25 µg/L	96.5	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	1.25 µg/L	96.2	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	1.25 µg/L	104	70.0	130
		EP231X-INJ: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.5 µg/L	110	70.0	130
		EP231X-INJ: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.5 µg/L	102	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5761018)							
EB2413756-002	Anonymous	EP231X-INJ: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.468 µg/L	105	70.0	130
		EP231X-INJ: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.475 µg/L	107	70.0	130
		EP231X-INJ: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.48 µg/L	130	70.0	130
		EP231X-INJ: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.483 µg/L	110	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2413951**	Page	: 1 of 8
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM	No. of samples received	: 14
Order number	: 60612563 3.1	No. of samples analysed	: 14

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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

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.**

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP231S: PFAS Surrogate	EB2413951-007	0861_QC306_240417	**13C4-PFOS**	----	179 %	65.0-140 %	**Recovery greater than upper data quality objective**
EP231S: PFAS Surrogate	EB2413951-007	0861_QC306_240417	**13C8-PFOA**	----	161 %	71.0-133 %	**Recovery greater than upper data quality objective**

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	13	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	13	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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_QC400_240409	**09-Apr-2024**	**08-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC300_240409	**09-Apr-2024**	**09-May-2024**	06-Oct-2024	✓	**09-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC401_240410	**10-Apr-2024**	**08-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC301_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**09-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC402_240411	**11-Apr-2024**	**08-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC302_240411	**11-Apr-2024**	**09-May-2024**	08-Oct-2024	✓	**09-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC403_240412	**12-Apr-2024**	**08-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ)							

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
EP231A: Perfluoroalkyl Sulfonic Acids - Continued							
0861_QC303_240412	12-Apr-2024	09-May-2024	09-Oct-2024	✓	09-May-2024	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC404_240415	15-Apr-2024	08-May-2024	12-Oct-2024	✓	08-May-2024	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC304_240415	15-Apr-2024	09-May-2024	12-Oct-2024	✓	09-May-2024	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC305_240416	16-Apr-2024	09-May-2024	13-Oct-2024	✓	09-May-2024	13-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC306_240417	17-Apr-2024	09-May-2024	14-Oct-2024	✓	09-May-2024	14-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC307_240418	18-Apr-2024	09-May-2024	15-Oct-2024	✓	09-May-2024	15-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC308_240419	19-Apr-2024	09-May-2024	16-Oct-2024	✓	09-May-2024	16-Oct-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0861_QC400_240409	09-Apr-2024	08-May-2024	06-Oct-2024	✓	08-May-2024	06-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC300_240409	09-Apr-2024	09-May-2024	06-Oct-2024	✓	09-May-2024	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC401_240410	10-Apr-2024	08-May-2024	07-Oct-2024	✓	08-May-2024	07-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC301_240410	10-Apr-2024	09-May-2024	07-Oct-2024	✓	09-May-2024	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC402_240411	11-Apr-2024	08-May-2024	08-Oct-2024	✓	08-May-2024	08-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC302_240411	11-Apr-2024	09-May-2024	08-Oct-2024	✓	09-May-2024	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC403_240412	12-Apr-2024	08-May-2024	09-Oct-2024	✓	08-May-2024	09-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC303_240412	12-Apr-2024	09-May-2024	09-Oct-2024	✓	09-May-2024	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC404_240415	15-Apr-2024	08-May-2024	12-Oct-2024	✓	08-May-2024	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC304_240415	15-Apr-2024	09-May-2024	12-Oct-2024	✓	09-May-2024	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC305_240416	16-Apr-2024	09-May-2024	13-Oct-2024	✓	09-May-2024	13-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC306_240417	17-Apr-2024	09-May-2024	14-Oct-2024	✓	09-May-2024	14-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC307_240418	18-Apr-2024	09-May-2024	15-Oct-2024	✓	09-May-2024	15-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC308_240419	19-Apr-2024	09-May-2024	16-Oct-2024	✓	09-May-2024	16-Oct-2024	✓

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0861_QC400_240409	**09-Apr-2024**	**08-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC300_240409	**09-Apr-2024**	**09-May-2024**	06-Oct-2024	✓	**09-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC401_240410	**10-Apr-2024**	**08-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC301_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**09-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC402_240411	**11-Apr-2024**	**08-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC302_240411	**11-Apr-2024**	**09-May-2024**	08-Oct-2024	✓	**09-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC403_240412	**12-Apr-2024**	**08-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC303_240412	**12-Apr-2024**	**09-May-2024**	09-Oct-2024	✓	**09-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC404_240415	**15-Apr-2024**	**08-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC304_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**09-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC305_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**09-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC306_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**09-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC307_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**09-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC308_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**09-May-2024**	16-Oct-2024	✓

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0861_QC400_240409	**09-Apr-2024**	**08-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC300_240409	**09-Apr-2024**	**09-May-2024**	06-Oct-2024	✓	**09-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC401_240410	**10-Apr-2024**	**08-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC301_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**09-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC402_240411	**11-Apr-2024**	**08-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC302_240411	**11-Apr-2024**	**09-May-2024**	08-Oct-2024	✓	**09-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC403_240412	**12-Apr-2024**	**08-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC303_240412	**12-Apr-2024**	**09-May-2024**	09-Oct-2024	✓	**09-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC404_240415	**15-Apr-2024**	**08-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC304_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**09-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC305_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**09-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC306_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**09-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC307_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**09-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC308_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**09-May-2024**	16-Oct-2024	✓

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
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0861_QC400_240409	**09-Apr-2024**	**08-May-2024**	06-Oct-2024	✓	**08-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC300_240409	**09-Apr-2024**	**09-May-2024**	06-Oct-2024	✓	**09-May-2024**	06-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC401_240410	**10-Apr-2024**	**08-May-2024**	07-Oct-2024	✓	**08-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC301_240410	**10-Apr-2024**	**09-May-2024**	07-Oct-2024	✓	**09-May-2024**	07-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC402_240411	**11-Apr-2024**	**08-May-2024**	08-Oct-2024	✓	**08-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC302_240411	**11-Apr-2024**	**09-May-2024**	08-Oct-2024	✓	**09-May-2024**	08-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC403_240412	**12-Apr-2024**	**08-May-2024**	09-Oct-2024	✓	**08-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC303_240412	**12-Apr-2024**	**09-May-2024**	09-Oct-2024	✓	**09-May-2024**	09-Oct-2024	✓
HDPE (no PTFE) (EP231X) 0861_QC404_240415	**15-Apr-2024**	**08-May-2024**	12-Oct-2024	✓	**08-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC304_240415	**15-Apr-2024**	**09-May-2024**	12-Oct-2024	✓	**09-May-2024**	12-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC305_240416	**16-Apr-2024**	**09-May-2024**	13-Oct-2024	✓	**09-May-2024**	13-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC306_240417	**17-Apr-2024**	**09-May-2024**	14-Oct-2024	✓	**09-May-2024**	14-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC307_240418	**18-Apr-2024**	**09-May-2024**	15-Oct-2024	✓	**09-May-2024**	15-Oct-2024	✓
HDPE (no PTFE) (EP231X-INJ) 0861_QC308_240419	**19-Apr-2024**	**09-May-2024**	16-Oct-2024	✓	**09-May-2024**	16-Oct-2024	✓

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	13	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	2	16	**12.50**	**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
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	16	**6.25**	**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
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	13	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	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	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-INJ	WATER	In house: Direct injection analysis of fresh waters after dilution (1:1) with mobile phase solvent. Analysis by LC-Electrospray-MS-MS, Negative Mode using MRM. Where commercially available, isotopically labelled analogues of the target analytes are used as internal standards for quantification. Where a labelled analogue is not commercially available, the internal standard with similar chemistry and the closest retention time to the target is used for quantification. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers.

Preparation Methods	Method	Matrix	Method Descriptions
Preparation for PFAS in water.	EP231-PR	WATER	Method presumes direct injection without workup. Preparation includes addition of internal standard and surrogate, and filtration prior to analysis.
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	: **EB2414902**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Facsimile	: ----	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 3
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 03-May-2024 16:34	Issue Date	: 07-May-2024
Client Requested Due Date	: 15-May-2024	Scheduled Reporting Date	: **15-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 6.5°C, 8.6°C, 7.7°C - Ice present
Receipt Detail	: HARD ESKY	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
- ***SRN Reissued 07/05/2024: As per the email from [redacted] on 07/05/2024, sample IDs have been amended from #003 "0861_Tripblank_240503" to "0861_QC409_240503" and #004 "0861_Rinsate_240503" to "0861_QC309_240503."***
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- **PFAS analysis will be conducted by ALS Environmental, Melbourne, NATA accreditation No. 825, Site No. 13778.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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 (30 analytes)
EB2414902-001	03-May-2024 00:00	0861_MW041_240503	✓
EB2414902-002	03-May-2024 00:00	0861_MW025_240503	✓
EB2414902-003	03-May-2024 00:00	0861_QC409_240503	✓
EB2414902-004	03-May-2024 00:00	0861_QC309_240503	✓

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]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

DERP ESDAT REPORTS
- EDI Format - ESDAT (ESDAT) Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- A4 - AU Tax Invoice (INV) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

Inter-Laboratory Testing

Analysis conducted by ALS Melbourne, NATA accreditation no. 825, site no. 13778 (Chemistry).

(WATER) EP231A: Perfluoroalkyl Sulfonic Acids

(WATER) EP231B: Perfluoroalkyl Carboxylic Acids

(WATER) EP231C: Perfluoroalkyl Sulfonamides

(WATER) EP231D: (n:2) Fluorotelomer Sulfonic Acids

(WATER) EP231P: PFAS Sums

CERTIFICATE OF ANALYSIS

Work Order	: **EB2414902**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: ----	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 03-May-2024 16:34
Order number	: 60612563 3.1	Date Analysis Commenced	: 08-May-2024
C-O-C number	: ----	Issue Date	: 10-May-2024 14:02
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 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 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 Organic Chemist	Melbourne Organics, Springvale, VIC

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 tables in USEPA 1633 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: WATER (Matrix: WATER)				Sample ID	0861_MW041_240503	0861_MW025_240503	0861_QC409_240503	0861_QC309_240503	----
				Sampling date / time	03-May-2024 00:00	03-May-2024 00:00	03-May-2024 00:00	03-May-2024 00:00	----
Compound	CAS Number	LOR	Unit		EB2414902-001	EB2414902-002	EB2414902-003	EB2414902-004	--------
					Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.23**	**0.18**	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.04**	**0.15**	<0.02	<0.02	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.16**	**1.07**	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	**0.05**	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.33**	**1.39**	<0.01	<0.01	----
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	0.1	µg/L		**0.2**	**0.2**	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.30**	**0.36**	<0.02	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**0.30**	**0.48**	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	**0.12**	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.01**	**0.13**	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L		<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	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L		<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	----
EP231C: Perfluoroalkyl Sulfonamides									
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	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW041_240503	0861_MW025_240503	0861_QC409_240503	0861_QC309_240503	----
				Sampling date / time	03-May-2024 00:00	03-May-2024 00:00	03-May-2024 00:00	03-May-2024 00:00	----
Compound	CAS Number	LOR	Unit		EB2414902-001	EB2414902-002	EB2414902-003	EB2414902-004	--------
					Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	0.05	µg/L		<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	----
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	0.02	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	0.05	µg/L		<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	----
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	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**1.81**	**4.19**	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.49**	**2.46**	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**1.53**	**3.93**	<0.01	<0.01	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**98.1**	**96.8**	**92.2**	**94.4**	----
13C8-PFOA	----	0.02	%		**100**	**105**	**106**	**104**	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Inter-Laboratory Testing

Analysis conducted by ALS Melbourne, NATA accreditation no. 825, site no. 13778 (Chemistry).

(WATER) EP231A: Perfluoroalkyl Sulfonic Acids

(WATER) EP231B: Perfluoroalkyl Carboxylic Acids

(WATER) EP231C: Perfluoroalkyl Sulfonamides

(WATER) EP231D: (n:2) Fluorotelomer Sulfonic Acids

(WATER) EP231P: PFAS Sums

(WATER) EP231S: PFAS Surrogate

QUALITY CONTROL REPORT

Work Order	: **EB2414902**	Page	: 1 of 6
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	[redacted]	Contact	[redacted]
Address	[redacted]	Address	[redacted]
Telephone	: ----	Telephone	[redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 03-May-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 08-May-2024
C-O-C number	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 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]	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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: 5779043)									
EM2407049-001	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: 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: 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: 5779043)									
EM2407049-001	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5779043)									
EM2407049-001	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: 5779043) - continued									
EM2407049-001	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5779043)									
EM2407049-001	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: 5779043)									
EM2407049-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5779043)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	86.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	87.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	89.8	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	93.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	80.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5779043)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	81.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	94.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	89.6	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	87.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.1	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	76.1	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	88.5	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	78.7	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	89.9	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	105	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5779043)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	89.6	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	87.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.7	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	94.2	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	88.5	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	87.7	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5779043)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5779043) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	102	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	91.6	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	92.6	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	90.3	70.0	130
EP231P: PFAS Sums (QCLot: 5779043)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5779043)							
EM2407049-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	85.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	90.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	93.7	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	95.3	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	109	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	72.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5779043)							
EM2407049-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	84.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	97.8	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	96.7	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	88.5	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	79.9	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	92.0	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	69.2	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	93.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	105	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	109	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5779043)							

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: 5779043) - continued							
EM2407049-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	100	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	94.3	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	90.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	87.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	92.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	97.9	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: 5779043)							
EM2407049-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	104	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	99.3	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	101	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	81.8	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2414902**	Page	: 1 of 4
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 03-May-2024
Site	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM	No. of samples received	: 4
Order number	: 60612563 3.1	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.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, 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	1	18	5.56	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 / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW041_240503,	0861_MW025_240503,	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
0861_QC409_240503,	0861_QC309_240503							
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW041_240503,	0861_MW025_240503,	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
0861_QC409_240503,	0861_QC309_240503							
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
0861_MW041_240503,	0861_MW025_240503,	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
0861_QC409_240503,	0861_QC309_240503							
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW041_240503,	0861_MW025_240503,	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
0861_QC409_240503,	0861_QC309_240503							
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
0861_MW041_240503,	0861_MW025_240503,	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
0861_QC409_240503,	0861_QC309_240503							

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	18	**5.56**	**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.

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 LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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	: **EB2414909**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Page	: 1 of 3
Order number	: 60612563 3.1	Quote number	: ES2019AECOMAU0030 (SY/139/19 V3)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AECOM		

Dates

Date Samples Received	: 03-May-2024 16:34	Issue Date	: 03-May-2024
Client Requested Due Date	: 15-May-2024	Scheduled Reporting Date	: **15-May-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 6.5°C, 8.6°C, 7.7°C - Ice present
Receipt Detail	: HARD ESKY	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
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- **PFAS analysis will be conducted by ALS Environmental, Melbourne, NATA accreditation No. 825, Site No. 13778.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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 (30 analytes)
EB2414909-001	03-May-2024 00:00	0861_MW057S_240503	✓
EB2414909-002	03-May-2024 00:00	0861_MW057I_240503	✓

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]
- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

DERP ESDAT REPORTS
- EDI Format - ESDAT (ESDAT) — Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- A4 - AU Tax Invoice (INV) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) — Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) — Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) — Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) — Email
- Chain of Custody (CoC) (COC) — Email
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) — Email
- EDI Format - ESDAT (ESDAT) — Email

[redacted]

Inter-Laboratory Testing

Analysis conducted by ALS Melbourne, NATA accreditation no. 825, site no. 13778 (Chemistry).

(WATER) EP231A: Perfluoroalkyl Sulfonic Acids

(WATER) EP231B: Perfluoroalkyl Carboxylic Acids

(WATER) EP231C: Perfluoroalkyl Sulfonamides

(WATER) EP231D: (n:2) Fluorotelomer Sulfonic Acids

(WATER) EP231P: PFAS Sums

CERTIFICATE OF ANALYSIS

Work Order	: **EB2414909**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 03-May-2024 16:34
Order number	: 60612563 3.1	Date Analysis Commenced	: 08-May-2024
C-O-C number	: ----	Issue Date	: 10-May-2024 14:02
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 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]	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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 tables in USEPA 1633 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: WATER (Matrix: WATER)				Sample ID	0861_MW057S_240503	0861_MW057I_240503	----	----	----
				Sampling date / time	03-May-2024 00:00	03-May-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2414909-001	EB2414909-002	--------	--------	--------
					Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**0.07**	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**0.06**	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**0.27**	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		**0.15**	<0.01	----	----	----
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		**0.02**	<0.02	----	----	----
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**	<0.01	----	----	----
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW057S_240503	0861_MW057I_240503	----	----	----
				Sampling date / time	03-May-2024 00:00	03-May-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2414909-001	EB2414909-002	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.61**	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.42**	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.52**	<0.01	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**100**	**98.6**	----	----	----
13C8-PFOA	----	0.02	%		**105**	**100**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Inter-Laboratory Testing

Analysis conducted by ALS Melbourne, NATA accreditation no. 825, site no. 13778 (Chemistry).

(WATER) EP231A: Perfluoroalkyl Sulfonic Acids

(WATER) EP231B: Perfluoroalkyl Carboxylic Acids

(WATER) EP231C: Perfluoroalkyl Sulfonamides

(WATER) EP231D: (n:2) Fluorotelomer Sulfonic Acids

(WATER) EP231P: PFAS Sums

(WATER) EP231S: PFAS Surrogate

QUALITY CONTROL REPORT

Work Order	: **EB2414909**	Page	: 1 of 6
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	[redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 03-May-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 08-May-2024
C-O-C number	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM		
Site	: ----		
Quote number	: SY/139/19 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]	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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: 5779043)									
EM2407049-001	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: 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: 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: 5779043)									
EM2407049-001	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: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 5779043)									
EM2407049-001	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: 5779043) - continued									
EM2407049-001	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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 5779043)									
EM2407049-001	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: 5779043)									
EM2407049-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5779043)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	86.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	87.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	89.8	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	93.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	80.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5779043)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	81.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	94.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	89.6	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	87.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	90.1	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	76.1	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	88.5	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	78.7	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	89.9	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	105	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5779043)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	97.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	89.6	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	87.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.7	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	94.2	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	88.5	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	87.7	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5779043)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5779043) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	102	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.238 µg/L	91.6	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	92.6	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.242 µg/L	90.3	70.0	130
EP231P: PFAS Sums (QCLot: 5779043)								
EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.01	µg/L	<0.01	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	----	----

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5779043)							
EM2407049-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.222 µg/L	85.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.235 µg/L	90.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.228 µg/L	93.7	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	95.3	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	109	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	72.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5779043)							
EM2407049-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	84.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	97.8	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	96.7	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	88.5	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	79.9	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	92.0	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	69.2	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	93.6	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	105	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	109	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5779043)							

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: 5779043) - continued							
EM2407049-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	100	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	94.3	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	90.5	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	87.6	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	92.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	97.9	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: 5779043)							
EM2407049-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	104	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.238 µg/L	99.3	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	101	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.242 µg/L	81.8	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2414909**	Page	: 1 of 4
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1 QLD_0861_PFASOMP_24	Date Samples Received	: 03-May-2024
Site	: ----	Issue Date	: 10-May-2024
Sampler	: AECOM	No. of samples received	: 2
Order number	: 60612563 3.1	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, 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	1	18	5.56	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 / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW057S_240503,	0861_MW057I_240503	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW057S_240503,	0861_MW057I_240503	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X)								
0861_MW057S_240503,	0861_MW057I_240503	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW057S_240503,	0861_MW057I_240503	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
0861_MW057S_240503,	0861_MW057I_240503	**03-May-2024**	**09-May-2024**	30-Oct-2024	✓	**09-May-2024**	30-Oct-2024	✓

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	18	**5.56**	**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.

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 LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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.

Australian Government
Department of Industry, Science and Resources

National Measurement Institute

SAMPLE RECEIPT NOTIFICATION

CUSTOMER DETAILS

Attention: [redacted]

Customer: AECOM AUSTRALIA PTY LTD

Address: [redacted]

Email: [redacted]

Telephone:

LABORATORY DETAILS

Lab: National Measurement Institute

Contact: Client Services

Address: [redacted]

Email: [redacted]

Telephone: [redacted]

SAMPLE DETAILS

NMI Job Name: AECO06/240430/1

Total No. of Samples: 16

LRNs	Estimated Report Date	Customer Sample ID	Lab Sample Description
N24/009271	9-MAY-2024	0861_QC206_240415	WATER 15/04/2024
N24/009272	9-MAY-2024	0861_QC207_240416	WATER 16/04/2024

N24/009273	9-MAY-2024	0861_QC201_240409	SEDIMENT 09/04/2024
N24/009274	9-MAY-2024	0861_QC202_240410	SEDIMENT 10/04/2024
N24/009275	9-MAY-2024	0861_QC203_240411	SEDIMENT 11/04/2024
N24/009276	9-MAY-2024	0861_QC204_240412	SEDIMENT 12/04/2024
N24/009277	9-MAY-2024	0861_QC205_240412	SEDIMENT 12/04/2024
N24/009278	9-MAY-2024	0861_QC200_240409	WATER 09/04/2024
N24/009279	9-MAY-2024	0861_QC200_240409	SEDIMENT 09/04/2024
N24/009280	9-MAY-2024	0861_QC201_240409	WATER 09/04/2024
N24/009281	9-MAY-2024	0861_QC202_240410	WATER 10/04/2024
N24/009282	9-MAY-2024	0861_QC203_240411	WATER 11/04/2024
N24/009283	9-MAY-2024	0861_QC204_240412	WATER 12/04/2024
N24/009284	9-MAY-2024	0861_QC205_240412	WATER 12/04/2024
N24/009285	9-MAY-2024	0861_QC208_240417	WATER 17/04/2024
N24/009286	9-MAY-2024	0861_QC209_240418	WATER 18/04/2024

SAMPLE RECEIVED CONDITION

Date samples received:	30-APR-2024
Sample received in good order:	Yes
NMI Quotation no. provided:	QLD_0861_PFASOMP_24
Client purchase order number:	60612563_3_1
Temperature of samples:	Chilled
Comments:	KINDLY CONFIRM ONE EMAIL ADDRESS WHICH IS NOT CLEARLY WRITTEN- [redacted]
Mode of Delivery:	

Additional Terms and Conditions

Incomplete / unclear information about samples or required testing will delay the start of the analysis work.

If you require your Purchase Order (PO) number to be included on our invoice, please provide the number during sample submission and before the completion of work to avoid unnecessary delays and/or additional processing/handling fees.

Alterations to Client requirements requested after commencement of testing may incur charges.

The lodgement of an order or receipt of samples for NMI services referenced in this Sample Receipt Notification constitutes an acceptence of the current version of NMI Terms and Conditions or other applicable Terms referenced in the NMI Quotation. NMI Terms and Conditions are available on the web at https://www.industry.gov.au/client-services/testing-and-analysis-services/chemical-and-biological-analysis-services-terms-and-conditions

REPORT OF ANALYSIS

Report No. RN1427801

Client	: AECOM AUSTRALIA PTY LTD	**Job No.**	: AECO06/240430/1
	[redacted]	**Quote No.**	: QT-02257
	[redacted]	**Order No.**	: 60612563_3_1
		Date Received	: 30-APR-2024
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_24		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N24/009273	0861_QC201_240409	SEDIMENT 09/04/2024
N24/009274	0861_QC202_240410	SEDIMENT 10/04/2024
N24/009275	0861_QC203_240411	SEDIMENT 11/04/2024
N24/009276	0861_QC204_240412	SEDIMENT 12/04/2024

Lab Reg No.		N24/009273	N24/009274	N24/009275	N24/009276	
Date Sampled		09-APR-2024	10-APR-2024	11-APR-2024	12-APR-2024	
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
PFBA (375-22-4)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFPeA (2706-90-3)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFHxA (307-24-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFHpA (375-85-9)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFOA (335-67-1)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFNA (375-95-1)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFDA (335-76-2)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFUdA (2058-94-8)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFDoA (307-55-1)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFTrDA (72629-94-8)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFTeDA (376-06-7)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFHxDA (67905-19-5)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFODA (16517-11-6)	mg/kg	<0.005	<0.005	<0.005	<0.005	NR70
FOUEA (70887-84-2)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFBS (375-73-5)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFPeS (2706-91-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFHxS (355-46-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFHpS (375-92-8)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFOS (1763-23-1)	mg/kg	<0.002	0.069	0.0046	0.0021	NR70
PFNS (68259-12-1)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFDS (335-77-3)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
PFOSA (754-91-6)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
N-MeFOSA (31506-32-8)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-EtFOSA (4151-50-2)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-MeFOSAA (2355-31-9)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-EtFOSAA(2991-50-6)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
N-MeFOSE (24448-09-7)	mg/kg	<0.005	<0.005	<0.005	<0.005	NR70

REPORT OF ANALYSIS

Lab Reg No.		N24/009273	N24/009274	N24/009275	N24/009276	
Date Sampled		09-APR-2024	10-APR-2024	11-APR-2024	12-APR-2024	
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
N-EtFOSE (1691-99-2)	mg/kg	<0.005	<0.005	<0.005	<0.005	NR70
4:2 FTS (757124-72-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
6:2 FTS (27619-97-2)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
8:2 FTS (39108-34-4)	mg/kg	<0.001	<0.001	<0.001	<0.001	NR70
10:2 FTS (120226-60-0)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
8:2 diPAP (678-41-1)	mg/kg	<0.002	<0.002	<0.002	<0.002	NR70
PFBA (Surrogate Recovery)	%	98	100	103	103	NR70
PFPeA (Surrogate Recovery)	%	98	91	96	101	NR70
PFHxA (Surrogate Recovery)	%	96	88	97	100	NR70
PFHpA (Surrogate Recovery)	%	97	91	101	106	NR70
PFOA (Surrogate Recovery)	%	103	97	107	100	NR70
PFNA (Surrogate Recovery)	%	105	111	112	112	NR70
PFDA (Surrogate Recovery)	%	101	97	95	105	NR70
PFUdA (Surrogate Recovery)	%	87	71	58	98	NR70
PFDoA (Surrogate Recovery)	%	95	84	71	108	NR70
PFTeDA (Surrogate Recovery)	%	130	122	126	132	NR70
PFHxDA (Surrogate Recovery)	%	91	58	52	89	NR70
FOUEA (Surrogate Recovery)	%	81	80	86	85	NR70
PFBS (Surrogate Recovery)	%	85	89	90	95	NR70
PFHxS (Surrogate Recovery)	%	94	102	105	107	NR70
PFOS (Surrogate Recovery)	%	95	97	99	105	NR70
PFOSA (Surrogate Recovery)	%	78	70	52	82	NR70
N-MeFOSA (Surrogate Recovery)	%	85	54	71	87	NR70
N-EtFOSA (Surrogate Recovery)	%	58	32	36	68	NR70
N-MeFOSAA (Surrogate Recovery)	%	98	52	95	100	NR70
N-EtFOSAA (Surrogate Recovery)	%	114	103	113	111	NR70
N-MeFOSE (Surrogate Recovery)	%	66	46	59	69	NR70
N-EtFOSE (Surrogate Recovery)	%	71	38	41	77	NR70
4:2 FTS (Surrogate Recovery)	%	69	101	81	86	NR70
6:2 FTS (Surrogate Recovery)	%	76	151	97	80	NR70
8:2 FTS (Surrogate Recovery)	%	93	167	93	91	NR70
8:2 diPAP (Surrogate Recovery)	%	181	176	188	181	NR70
Dates						
Date extracted		2-MAY-2024	2-MAY-2024	2-MAY-2024	2-MAY-2024	
Date analysed		2-MAY-2024	2-MAY-2024	2-MAY-2024	2-MAY-2024	

N24/009273
to
N24/009279

REPORT OF ANALYSIS

PFOS and PFHxS are quantified using a combined branched and linear standard,
linear and branched isomers are totalled for reporting.
All results corrected for labelled surrogate recoveries.

Selected PFAS surrogate recoveries are biased due to matrix effects.ô
High PFAS surrogate recoveries accepted - results corrected for recovery.
Surrogate recoveries low for selected analytes - PFAS LORs not raised since S/N >10.

[redacted]

Organics - NSW
Accreditation No. 198

09-MAY-2024

Lab Reg No.		N24/009273	N24/009274	N24/009275	N24/009276	
Date Sampled		09-APR-2024	10-APR-2024	11-APR-2024	12-APR-2024	
	Units					Method
Trace Elements						
Total Solids	%	58.1	46.1	59.2	71.9	NT2_49
Dates						
Date extracted		6-MAY-2024	6-MAY-2024	6-MAY-2024	6-MAY-2024	
Date analysed		7-MAY-2024	7-MAY-2024	7-MAY-2024	7-MAY-2024	

[redacted]

Inorganics - NSW
Accreditation No. 198

09-MAY-2024

REPORT OF ANALYSIS

Report No. RN1427801

Client	: AECOM AUSTRALIA PTY LTD	**Job No.**	: AECO06/240430/1
	[redacted]	**Quote No.**	: QT-02257
	[redacted]	**Order No.**	: 60612563_3_1
		Date Received	: 30-APR-2024
Attention	: [redacted]	**Sampled By**	: [redacted]
Project Name	: QLD_0861_PFASOMP_24		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N24/009277	0861_QC205_240412	SEDIMENT 12/04/2024
N24/009279	0861_QC200_240409	SEDIMENT 09/04/2024

Lab Reg No.		N24/009277	N24/009279			
Date Sampled		12-APR-2024	09-APR-2024			
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
PFBA (375-22-4)	mg/kg	<0.002	<0.002			NR70
PFPeA (2706-90-3)	mg/kg	<0.002	<0.002			NR70
PFHxA (307-24-4)	mg/kg	<0.001	<0.001			NR70
PFHpA (375-85-9)	mg/kg	<0.001	<0.001			NR70
PFOA (335-67-1)	mg/kg	<0.001	<0.001			NR70
PFNA (375-95-1)	mg/kg	<0.001	<0.001			NR70
PFDA (335-76-2)	mg/kg	<0.001	<0.001			NR70
PFUdA (2058-94-8)	mg/kg	<0.002	<0.002			NR70
PFDoA (307-55-1)	mg/kg	<0.002	<0.002			NR70
PFTrDA (72629-94-8)	mg/kg	<0.002	<0.002			NR70
PFTeDA (376-06-7)	mg/kg	<0.002	<0.002			NR70
PFHxDA (67905-19-5)	mg/kg	<0.002	<0.002			NR70
PFODA (16517-11-6)	mg/kg	<0.005	<0.005			NR70
FOUEA (70887-84-2)	mg/kg	<0.001	<0.001			NR70
PFBS (375-73-5)	mg/kg	<0.001	<0.001			NR70
PFPeS (2706-91-4)	mg/kg	<0.001	<0.001			NR70
PFHxS (355-46-4)	mg/kg	<0.001	<0.001			NR70
PFHpS (375-92-8)	mg/kg	<0.001	<0.001			NR70
PFOS (1763-23-1)	mg/kg	<0.002	0.015			NR70
PFNS (68259-12-1)	mg/kg	<0.001	<0.001			NR70
PFDS (335-77-3)	mg/kg	<0.001	<0.001			NR70
PFOSA (754-91-6)	mg/kg	<0.001	<0.001			NR70
N-MeFOSA (31506-32-8)	mg/kg	<0.002	<0.002			NR70
N-EtFOSA (4151-50-2)	mg/kg	<0.002	<0.002			NR70
N-MeFOSAA (2355-31-9)	mg/kg	<0.002	<0.002			NR70
N-EtFOSAA(2991-50-6)	mg/kg	<0.002	<0.002			NR70
N-MeFOSE (24448-09-7)	mg/kg	<0.005	<0.005			NR70
N-EtFOSE (1691-99-2)	mg/kg	<0.005	<0.005			NR70
4:2 FTS (757124-72-4)	mg/kg	<0.001	<0.001			NR70

REPORT OF ANALYSIS

Lab Reg No.		N24/009277	N24/009279			
Date Sampled		12-APR-2024	09-APR-2024			
	Units					Method
PFAS (per-and poly-fluoroalkyl substances)						
6:2 FTS (27619-97-2)	mg/kg	<0.001	<0.001			NR70
8:2 FTS (39108-34-4)	mg/kg	<0.001	<0.001			NR70
10:2 FTS (120226-60-0)	mg/kg	<0.002	<0.002			NR70
8:2 diPAP (678-41-1)	mg/kg	<0.002	<0.002			NR70
PFBA (Surrogate Recovery)	%	100	102			NR70
PFPeA (Surrogate Recovery)	%	100	99			NR70
PFHxA (Surrogate Recovery)	%	104	97			NR70
PFHpA (Surrogate Recovery)	%	100	101			NR70
PFOA (Surrogate Recovery)	%	101	102			NR70
PFNA (Surrogate Recovery)	%	96	110			NR70
PFDA (Surrogate Recovery)	%	97	110			NR70
PFUdA (Surrogate Recovery)	%	96	99			NR70
PFDoA (Surrogate Recovery)	%	100	114			NR70
PFTeDA (Surrogate Recovery)	%	101	138			NR70
PFHxDA (Surrogate Recovery)	%	113	119			NR70
FOUEA (Surrogate Recovery)	%	56	95			NR70
PFBS (Surrogate Recovery)	%	97	97			NR70
PFHxS (Surrogate Recovery)	%	98	102			NR70
PFOS (Surrogate Recovery)	%	101	102			NR70
PFOSA (Surrogate Recovery)	%	98	96			NR70
N-MeFOSA (Surrogate Recovery)	%	101	94			NR70
N-EtFOSA (Surrogate Recovery)	%	108	87			NR70
N-MeFOSAA (Surrogate Recovery)	%	84	107			NR70
N-EtFOSAA (Surrogate Recovery)	%	89	126			NR70
N-MeFOSE (Surrogate Recovery)	%	84	70			NR70
N-EtFOSE (Surrogate Recovery)	%	99	84			NR70
4:2 FTS (Surrogate Recovery)	%	77	90			NR70
6:2 FTS (Surrogate Recovery)	%	70	78			NR70
8:2 FTS (Surrogate Recovery)	%	80	94			NR70
8:2 diPAP (Surrogate Recovery)	%	112	220			NR70
Dates						
Date extracted		2-MAY-2024	2-MAY-2024			
Date analysed		2-MAY-2024	2-MAY-2024			

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REPORT OF ANALYSIS

Lab Reg No.		N24/009277	N24/009279			
Date Sampled		12-APR-2024	09-APR-2024			
	Units					Method
Trace Elements						
Total Solids	%	78.0	52.8			NT2_49
Dates						
Date extracted		6-MAY-2024	6-MAY-2024			
Date analysed		7-MAY-2024	7-MAY-2024			

[redacted]

09-MAY-2024

All results are expressed on a dry weight basis.

REPORT OF ANALYSIS

Report No. RN1427801

Client	: AECOM AUSTRALIA PTY LTD	**Job No.**	: AECO06/240430/1
	[redacted]	**Quote No.**	: QT-02257
	[redacted]	**Order No.**	: 60612563_3_1
		Date Received	: 30-APR-2024
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_24		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N24/009271	0861_QC206_240415	WATER 15/04/2024
N24/009272	0861_QC207_240416	WATER 16/04/2024
N24/009278	0861_QC200_240409	WATER 09/04/2024
N24/009280	0861_QC201_240409	WATER 09/04/2024

Lab Reg No.			N24/009271	N24/009272	N24/009278	N24/009280	
Date Sampled			15-APR-2024	16-APR-2024	09-APR-2024	09-APR-2024	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
PFBA (375-22-4)		ug/L	0.30	<0.05	<0.05	<0.05	NR70
PFPeA (2706-90-3)		ug/L	0.39	<0.02	<0.02	<0.02	NR70
PFHxA (307-24-4)		ug/L	1.7	<0.01	<0.01	<0.01	NR70
PFHpA (375-85-9)		ug/L	0.20	<0.01	<0.01	<0.01	NR70
PFOA (335-67-1)		ug/L	0.086	<0.01	<0.01	<0.01	NR70
PFNA (375-95-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDA (335-76-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFUdA (2058-94-8)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDoA (307-55-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFTrDA (72629-94-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFTeDA (376-06-7)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFHxDA (67905-19-5)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFODA (16517-11-6)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
FOUEA (70887-84-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDS (335-77-3)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFPeS (2706-91-4)		ug/L	1.4	<0.01	<0.01	<0.01	NR70
PFHxS (355-46-4)		ug/L	5.5	<0.01	<0.01	<0.01	NR70
PFHpS (375-92-8)		ug/L	0.041	<0.01	<0.01	<0.01	NR70
PFOS (1763-23-1)		ug/L	0.44	<0.02	<0.02	<0.02	NR70
PFNS (68259-12-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFBS (375-73-5)		ug/L	2.0	<0.01	<0.01	<0.01	NR70
PFOSA (754-91-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSA (31506-32-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-EtFOSA (4151-50-2)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-MeFOSAA (2355-31-9)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-EtFOSAA(2991-50-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSE (24448-09-7)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70

REPORT OF ANALYSIS

Lab Reg No.			N24/009271	N24/009272	N24/009278	N24/009280	
Date Sampled			15-APR-2024	16-APR-2024	09-APR-2024	09-APR-2024	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
N-EtFOSE (1691-99-2)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
4:2 FTS (757124-72-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
6:2 FTS (27619-97-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 FTS (39108-34-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
10:2 FTS (120226-60-0)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 diPAP (678-41-1)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFBA (Surrogate Recovery)		%	114	85	88	86	NR70
PFPeA (Surrogate Recovery)		%	109	89	110	97	NR70
PFHxA (Surrogate Recovery)		%	126	86	78	89	NR70
PFHpA (Surrogate Recovery)		%	122	86	83	91	NR70
PFOA (Surrogate Recovery)		%	111	76	79	85	NR70
PFNA (Surrogate Recovery)		%	119	55	72	70	NR70
PFDA (Surrogate Recovery)		%	121	48	69	71	NR70
PFUdA (Surrogate Recovery)		%	99	30	60	59	NR70
PFDoA (Surrogate Recovery)		%	96	31	59	53	NR70
PFTeDA (Surrogate Recovery)		%	94	45	56	55	NR70
PFHxDA (Surrogate Recovery)		%	87	70	68	66	NR70
FOUEA (Surrogate Recovery)		%	84	31	48	45	NR70
PFBS (Surrogate Recovery)		%	123	94	78	89	NR70
PFHxS (Surrogate Recovery)		%	124	84	87	93	NR70
PFOS (Surrogate Recovery)		%	110	60	79	80	NR70
PFOSA (Surrogate Recovery)		%	109	29	54	53	NR70
N-MeFOSA (Surrogate Recovery)		%	92	21	36	38	NR70
N-EtFOSA (Surrogate Recovery)		%	92	19	33	33	NR70
N-MeFOSAA (Surrogate Recovery)		%	83	24	52	47	NR70
N-EtFOSAA (Surrogate Recovery)		%	75	24	53	47	NR70
N-MeFOSE (Surrogate Recovery)		%	112	21	38	39	NR70
N-EtFOSE (Surrogate Recovery)		%	101	23	43	42	NR70
4:2 FTS (Surrogate Recovery)		%	84	80	104	104	NR70
6:2 FTS (Surrogate Recovery)		%	79	62	78	76	NR70
8:2 FTS (Surrogate Recovery)		%	77	41	70	61	NR70
8:2 diPAP (Surrogate Recovery)		%	70	57	70	65	NR70
Dates							
Date extracted			2-MAY-2024	2-MAY-2024	2-MAY-2024	2-MAY-2024	
Date analysed			2-MAY-2024	2-MAY-2024	2-MAY-2024	2-MAY-2024	

N24/009272
to
N24/009286

PFOS and PFHxS are quantified using a combined branched and linear standard,
linear and branched isomers are totalled for reporting.
All results corrected for labelled surrogate recoveries.

Selected PFAS surrogate recoveries are biased due to matrix effects.ô
Surrogate recoveries low for selected analytes - PFAS LORs not raised since S/N >10.

LOR raised for N-EtFOSA in sample N24/009272 due to low surrogate recovery.



09-MAY-2024

REPORT OF ANALYSIS

Client	: AECOM AUSTRALIA PTY LTD	**Job No.**	: AECO06/240430/1
	[redacted]	**Quote No.**	: QT-02257
	[redacted]	**Order No.**	: 60612563_3_1
		Date Received	: 30-APR-2024
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_24		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N24/009281	0861_QC202_240410	WATER 10/04/2024
N24/009282	0861_QC203_240411	WATER 11/04/2024
N24/009283	0861_QC204_240412	WATER 12/04/2024
N24/009284	0861_QC205_240412	WATER 12/04/2024

Lab Reg No.			N24/009281	N24/009282	N24/009283	N24/009284	
Date Sampled			10-APR-2024	11-APR-2024	12-APR-2024	12-APR-2024	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
PFBA (375-22-4)		ug/L	0.077	<0.05	<0.05	<0.05	NR70
PFPeA (2706-90-3)		ug/L	0.049	<0.02	<0.02	<0.02	NR70
PFHxA (307-24-4)		ug/L	0.092	<0.01	<0.01	<0.01	NR70
PFHpA (375-85-9)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFOA (335-67-1)		ug/L	0.021	<0.01	<0.01	<0.01	NR70
PFNA (375-95-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDA (335-76-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFUdA (2058-94-8)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDoA (307-55-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFTrDA (72629-94-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFTeDA (376-06-7)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFHxDA (67905-19-5)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFODA (16517-11-6)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
FOUEA (70887-84-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFDS (335-77-3)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFPeS (2706-91-4)		ug/L	0.025	<0.01	<0.01	<0.01	NR70
PFHxS (355-46-4)		ug/L	0.28	<0.01	<0.01	<0.01	NR70
PFHpS (375-92-8)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFOS (1763-23-1)		ug/L	0.75	<0.02	<0.02	<0.02	NR70
PFNS (68259-12-1)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
PFBS (375-73-5)		ug/L	0.051	<0.01	<0.01	<0.01	NR70
PFOSA (754-91-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSA (31506-32-8)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-EtFOSA (4151-50-2)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
N-MeFOSAA (2355-31-9)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-EtFOSAA(2991-50-6)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
N-MeFOSE (24448-09-7)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70

REPORT OF ANALYSIS

Lab Reg No.			N24/009281	N24/009282	N24/009283	N24/009284	
Date Sampled			10-APR-2024	11-APR-2024	12-APR-2024	12-APR-2024	
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
N-EtFOSE (1691-99-2)		ug/L	<0.05	<0.05	<0.05	<0.05	NR70
4:2 FTS (757124-72-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
6:2 FTS (27619-97-2)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 FTS (39108-34-4)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
10:2 FTS (120226-60-0)		ug/L	<0.01	<0.01	<0.01	<0.01	NR70
8:2 diPAP (678-41-1)		ug/L	<0.02	<0.02	<0.02	<0.02	NR70
PFBA (Surrogate Recovery)		%	89	91	88	88	NR70
PFPeA (Surrogate Recovery)		%	102	101	97	98	NR70
PFHxA (Surrogate Recovery)		%	79	86	81	80	NR70
PFHpA (Surrogate Recovery)		%	86	85	83	83	NR70
PFOA (Surrogate Recovery)		%	81	87	81	80	NR70
PFNA (Surrogate Recovery)		%	69	70	66	65	NR70
PFDA (Surrogate Recovery)		%	63	66	67	62	NR70
PFUdA (Surrogate Recovery)		%	50	53	55	61	NR70
PFDoA (Surrogate Recovery)		%	49	56	51	55	NR70
PFTeDA (Surrogate Recovery)		%	54	59	55	60	NR70
PFHxDA (Surrogate Recovery)		%	70	73	69	64	NR70
FOUEA (Surrogate Recovery)		%	38	46	42	41	NR70
PFBS (Surrogate Recovery)		%	87	85	74	83	NR70
PFHxS (Surrogate Recovery)		%	93	90	80	87	NR70
PFOS (Surrogate Recovery)		%	86	73	74	80	NR70
PFOSA (Surrogate Recovery)		%	49	54	53	52	NR70
N-MeFOSA (Surrogate Recovery)		%	29	43	34	39	NR70
N-EtFOSA (Surrogate Recovery)		%	25	37	31	36	NR70
N-MeFOSAA (Surrogate Recovery)		%	37	48	51	49	NR70
N-EtFOSAA (Surrogate Recovery)		%	36	52	53	49	NR70
N-MeFOSE (Surrogate Recovery)		%	30	43	35	42	NR70
N-EtFOSE (Surrogate Recovery)		%	30	45	38	45	NR70
4:2 FTS (Surrogate Recovery)		%	118	94	94	97	NR70
6:2 FTS (Surrogate Recovery)		%	79	86	72	68	NR70
8:2 FTS (Surrogate Recovery)		%	61	64	61	70	NR70
8:2 diPAP (Surrogate Recovery)		%	82	65	72	71	NR70
Dates							
Date extracted			2-MAY-2024	2-MAY-2024	2-MAY-2024	2-MAY-2024	
Date analysed			2-MAY-2024	2-MAY-2024	2-MAY-2024	2-MAY-2024	

REPORT OF ANALYSIS

Lab Reg No.			N24/009281	N24/009282	N24/009283	N24/009284	
Date Sampled			10-APR-2024	11-APR-2024	12-APR-2024	12-APR-2024	
		Units					Method

[redacted]

Organics - NSW
Accreditation No. 198

09-MAY-2024

REPORT OF ANALYSIS

Report No. RN1427801

Client	: AECOM AUSTRALIA PTY LTD	**Job No.**	: AECO06/240430/1
	[redacted]	**Quote No.**	: QT-02257
	[redacted]	**Order No.**	: 60612563_3_1
		Date Received	: 30-APR-2024
Attention	: [redacted]	**Sampled By**	: CLIENT
Project Name	: QLD_0861_PFASOMP_24		
Your Client Services Manager	: [redacted]	**Phone**	: [redacted]

Lab Reg No.	Sample Ref	Sample Description
N24/009285	0861_QC208_240417	WATER 17/04/2024
N24/009286	0861_QC209_240418	WATER 18/04/2024

Lab Reg No.			N24/009285	N24/009286			
Date Sampled			17-APR-2024	18-APR-2024			
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
PFBA (375-22-4)		ug/L	<0.05	0.13			NR70
PFPeA (2706-90-3)		ug/L	<0.02	0.14			NR70
PFHxA (307-24-4)		ug/L	<0.01	0.66			NR70
PFHpA (375-85-9)		ug/L	<0.01	0.091			NR70
PFOA (335-67-1)		ug/L	<0.01	0.16			NR70
PFNA (375-95-1)		ug/L	<0.01	<0.01			NR70
PFDA (335-76-2)		ug/L	<0.01	<0.01			NR70
PFUdA (2058-94-8)		ug/L	<0.01	<0.01			NR70
PFDoA (307-55-1)		ug/L	<0.01	<0.01			NR70
PFTrDA (72629-94-8)		ug/L	<0.02	<0.02			NR70
PFTeDA (376-06-7)		ug/L	<0.02	<0.02			NR70
PFHxDA (67905-19-5)		ug/L	<0.02	<0.02			NR70
PFODA (16517-11-6)		ug/L	<0.05	<0.05			NR70
FOUEA (70887-84-2)		ug/L	<0.01	<0.01			NR70
PFDS (335-77-3)		ug/L	<0.01	<0.01			NR70
PFPeS (2706-91-4)		ug/L	<0.01	0.55			NR70
PFHxS (355-46-4)		ug/L	<0.01	3.0			NR70
PFHpS (375-92-8)		ug/L	<0.01	0.21			NR70
PFOS (1763-23-1)		ug/L	<0.02	2.3			NR70
PFNS (68259-12-1)		ug/L	<0.01	<0.01			NR70
PFBS (375-73-5)		ug/L	<0.01	0.62			NR70
PFOSA (754-91-6)		ug/L	<0.01	<0.01			NR70
N-MeFOSA (31506-32-8)		ug/L	<0.02	<0.02			NR70
N-EtFOSA (4151-50-2)		ug/L	<0.02	<0.02			NR70
N-MeFOSAA (2355-31-9)		ug/L	<0.01	<0.01			NR70
N-EtFOSAA(2991-50-6)		ug/L	<0.01	<0.01			NR70
N-MeFOSE (24448-09-7)		ug/L	<0.05	<0.05			NR70
N-EtFOSE (1691-99-2)		ug/L	<0.05	<0.05			NR70
4:2 FTS (757124-72-4)		ug/L	<0.01	<0.01			NR70

REPORT OF ANALYSIS

Lab Reg No.			N24/009285	N24/009286			
Date Sampled			17-APR-2024	18-APR-2024			
		Units					Method
PFAS (per-and poly-fluoroalkyl substances)							
6:2 FTS (27619-97-2)		ug/L	0.10	<0.01			NR70
8:2 FTS (39108-34-4)		ug/L	<0.01	<0.01			NR70
10:2 FTS (120226-60-0)		ug/L	<0.01	<0.01			NR70
8:2 diPAP (678-41-1)		ug/L	<0.02	<0.02			NR70
PFBA (Surrogate Recovery)		%	88	112			NR70
PFPeA (Surrogate Recovery)		%	89	113			NR70
PFHxA (Surrogate Recovery)		%	87	123			NR70
PFHpA (Surrogate Recovery)		%	87	120			NR70
PFOA (Surrogate Recovery)		%	80	114			NR70
PFNA (Surrogate Recovery)		%	62	112			NR70
PFDA (Surrogate Recovery)		%	56	113			NR70
PFUdA (Surrogate Recovery)		%	45	96			NR70
PFDoA (Surrogate Recovery)		%	43	97			NR70
PFTeDA (Surrogate Recovery)		%	50	89			NR70
PFHxDA (Surrogate Recovery)		%	71	87			NR70
FOUEA (Surrogate Recovery)		%	31	87			NR70
PFBS (Surrogate Recovery)		%	86	126			NR70
PFHxS (Surrogate Recovery)		%	88	122			NR70
PFOS (Surrogate Recovery)		%	80	113			NR70
PFOSA (Surrogate Recovery)		%	51	108			NR70
N-MeFOSA (Surrogate Recovery)		%	35	90			NR70
N-EtFOSA (Surrogate Recovery)		%	32	100			NR70
N-MeFOSAA (Surrogate Recovery)		%	40	78			NR70
N-EtFOSAA (Surrogate Recovery)		%	42	71			NR70
N-MeFOSE (Surrogate Recovery)		%	39	113			NR70
N-EtFOSE (Surrogate Recovery)		%	42	103			NR70
4:2 FTS (Surrogate Recovery)		%	75	80			NR70
6:2 FTS (Surrogate Recovery)		%	74	76			NR70
8:2 FTS (Surrogate Recovery)		%	65	78			NR70
8:2 diPAP (Surrogate Recovery)		%	64	69			NR70
Dates							
Date extracted			2-MAY-2024	2-MAY-2024			
Date analysed			2-MAY-2024	2-MAY-2024			

[redacted]

Accreditation No. 198

09-MAY-2024

REPORT OF ANALYSIS

Accredited for compliance with ISO/IEC 17025 - Testing.
This report shall not be reproduced except in full.
Results relate only to the sample(s) as received and tested.

* Denotes the analyte or test method is not within our ISO/IEC 17025 scope of accreditation.

Measurement Uncertainty is available upon request.

Note: Sampling date(s) have been provided by the client.
The testing was undertaken at: [redacted]

Australian Government

National Measurement Institute

QUALITY ASSURANCE REPORT

Client: AECOM AUSTRALIA PTY LTD

NMI QA Report No: AECO06/240430/1 **Sample Matrix:** Solid

Analyte	Method	LOR	Blank	Sample Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		mg/kg	mg/kg	mg/kg	mg/kg	%	%	%
				N24/009273				N24/009273
PFBA (375-22-4)	NR70	0.002	<0.002	<0.002	<0.002	-	127	109
PFPeA (2706-90-3)	NR70	0.002	<0.002	<0.002	<0.002	-	100	101
PFHxA (307-24-4)	NR70	0.001	<0.001	<0.001	<0.001	-	103	110
PFHpA (375-85-9)	NR70	0.001	<0.001	<0.001	<0.001	-	100	106
PFOA (335-67-1)	NR70	0.001	<0.001	<0.001	<0.001	-	99	109
PFNA (375-95-1)	NR70	0.001	<0.001	<0.001	<0.001	-	106	102
PFDA (335-76-2)	NR70	0.001	<0.001	<0.001	<0.001	-	103	114
PFUdA (2058-94-8)	NR70	0.002	<0.002	<0.002	<0.002	-	109	112
PFDoA (307-55-1)	NR70	0.002	<0.002	<0.002	<0.002	-	103	116
PFTrDA (72629-94-8)	NR70	0.002	<0.002	<0.002	<0.002	-	110	133
PFTeDA (376-06-7)	NR70	0.002	<0.002	<0.002	<0.002	-	108	120
PFHxDA (67905-19-5)	NR70	0.002	<0.002	<0.002	<0.002	-	92	111
PFODA (16517-11-6)	NR70	0.005	<0.005	<0.005	<0.005	-	99	122
FOUEA (70887-84-2)	NR70	0.001	<0.001	<0.001	<0.001	-	88	98
PFBS (375-73-5)	NR70	0.001	<0.001	<0.001	<0.001	-	104	114
PFPeS (2706-91-4)	NR70	0.001	<0.001	<0.001	<0.001	-	93	99
PFHxS (355-46-4)	NR70	0.001	<0.001	<0.001	<0.001	-	111	125
PFHpS (375-92-8)	NR70	0.001	<0.001	<0.001	<0.001	-	115	138
PFOS (1763-23-1)	NR70	0.002	<0.002	<0.002	<0.002	-	99	123
PFNS (68259-12-1)	NR70	0.001	<0.001	<0.001	<0.001	-	114	114
PFDS (335-77-3)	NR70	0.001	<0.001	<0.001	<0.001	-	102	104
PFOSA (754-91-6)	NR70	0.001	<0.001	<0.001	<0.001	-	109	114
N-MeFOSA (31506-32-8)	NR70	0.002	<0.002	<0.002	<0.002	-	109	117
N-EtFOSA (4151-50-2)	NR70	0.002	<0.002	<0.002	<0.002	-	99	110
N-MeFOSAA (2355-31-9)	NR70	0.002	<0.002	<0.002	<0.002	-	96	114
N-EtFOSAA(2991-50-6)	NR70	0.002	<0.002	<0.002	<0.002	-	108	96
N-MeFOSE (24448-09-7)	NR70	0.005	<0.005	<0.005	<0.005	-	129	133
N-EtFOSE (1691-99-2)	NR70	0.005	<0.005	<0.005	<0.005	-	102	95
4:2 FTS (757124-72-4)	NR70	0.001	<0.001	<0.001	<0.001	-	97	104
6:2 FTS (27619-97-2)	NR70	0.001	<0.001	<0.001	<0.001	-	83	110
8:2 FTS (39108-34-4)	NR70	0.001	<0.001	<0.001	<0.001	-	111	114
10:2 FTS (120226-60-0)	NR70	0.002	<0.002	<0.002	<0.002	-	93	108
8:2 diPAP (678-41-1)	NR70	0.002	<0.002	<0.002	<0.002	-	110	108

Results expressed in percentage (%) or mg/kg wherever appropriate.
Acceptable Spike recovery is 50-150%.
Maximum acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.

Signed: [redacted]

Organics Manager, NMI-North Ryde

Date: **9/05/2024**

Australian Government

National Measurement Institute

QUALITY ASSURANCE REPORT

Client: AECOM AUSTRALIA PTY LTD

NMI QA Report No: AECO06/240430/1 **Sample Matrix:** Liquid

Analyte	Method	LOR	Blank	Sample Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		ug/L	ug/L	ug/L	ug/L	%	%	%
PFBA (375-22-4)	NR70	0.05	<0.05	NA	NA	NA	121	NA
PFPeA (2706-90-3)	NR70	0.02	<0.02	NA	NA	NA	99	NA
PFHxA (307-24-4)	NR70	0.01	<0.01	NA	NA	NA	112	NA
PFHpA (375-85-9)	NR70	0.01	<0.01	NA	NA	NA	109	NA
PFOA (335-67-1)	NR70	0.01	<0.01	NA	NA	NA	111	NA
PFNA (375-95-1)	NR70	0.01	<0.01	NA	NA	NA	109	NA
PFDA (335-76-2)	NR70	0.01	<0.01	NA	NA	NA	108	NA
PFUdA (2058-94-8)	NR70	0.01	<0.01	NA	NA	NA	113	NA
PFDoA (307-55-1)	NR70	0.01	<0.01	NA	NA	NA	106	NA
PFTrDA (72629-94-8)	NR70	0.02	<0.02	NA	NA	NA	126	NA
PFTeDA (376-06-7)	NR70	0.02	<0.02	NA	NA	NA	129	NA
PFHxDA (67905-19-5)	NR70	0.02	<0.02	NA	NA	NA	108	NA
PFODA (16517-11-6)	NR70	0.05	<0.05	NA	NA	NA	118	NA
FOUEA (70887-84-2)	NR70	0.01	<0.01	NA	NA	NA	92	NA
PFBS (375-73-5)	NR70	0.01	<0.01	NA	NA	NA	113	NA
PFPeS (2706-91-4)	NR70	0.01	<0.01	NA	NA	NA	106	NA
PFHxS (355-46-4)	NR70	0.01	<0.01	NA	NA	NA	118	NA
PFHpS (375-92-8)	NR70	0.01	<0.01	NA	NA	NA	118	NA
PFOS (1763-23-1)	NR70	0.02	<0.02	NA	NA	NA	103	NA
PFNS (68259-12-1)	NR70	0.01	<0.01	NA	NA	NA	88	NA
PFDS (335-77-3)	NR70	0.01	<0.01	NA	NA	NA	64	NA
PFOSA (754-91-6)	NR70	0.01	<0.01	NA	NA	NA	110	NA
N-MeFOSA (31506-32-8)	NR70	0.02	<0.02	NA	NA	NA	120	NA
N-EtFOSA (4151-50-2)	NR70	0.02	<0.02	NA	NA	NA	116	NA
N-MeFOSAA (2355-31-9)	NR70	0.01	<0.01	NA	NA	NA	103	NA
N-EtFOSAA(2991-50-6)	NR70	0.01	<0.01	NA	NA	NA	113	NA
N-MeFOSE (24448-09-7)	NR70	0.05	<0.05	NA	NA	NA	130	NA
N-EtFOSE (1691-99-2)	NR70	0.05	<0.05	NA	NA	NA	111	NA
4:2 FTS (757124-72-4)	NR70	0.01	<0.01	NA	NA	NA	103	NA
6:2 FTS (27619-97-2)	NR70	0.01	<0.01	NA	NA	NA	109	NA
8:2 FTS (39108-34-4)	NR70	0.01	<0.01	NA	NA	NA	112	NA
10:2 FTS (120226-60-0)	NR70	0.01	<0.01	NA	NA	NA	52	NA
8:2 diPAP (678-41-1)	NR70	0.02	<0.02	NA	NA	NA	115	NA

Results expressed in percentage (%) or ug/L wherever appropriate.
Acceptable Spike recovery is 50-150%.
Maximum acceptable RPDs on spikes and duplicates is 40%.
'NA ' = Not Applicable.
RPD= Relative Percentage Difference.

Signed: [redacted]

Organics Manager, NMI-North Ryde

Date: **9/05/2024**

Appendix F

Equipment Calibration Certificates

Appendix F Equipment Calibration Certificates

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 16E103115

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.0		413905	pH 7.0
2. pH 4.00		pH 4.0		414104	pH 4.0
3. ORP		234.28mV		418135/418134	229.15mV
4. EC		2760uS		414103	2750uS
5. D O		100%		water	99.4% - 758.4mmHg
6. Temp		22.6°C		MultiTherm	23.2°C

Calibrated by: [redacted]

Calibration date: 04-Apr-24

Next calibration due: 1-Oct-24

Solinst Model 122 Interface Meter

Instrument Interface Meter (100M)
Serial No. 485360

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	8.49v
Probe	Cleaned/Decon	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: [redacted]

Calibration date: **4/04/2024 0:00**

Next calibration due: **3/05/2024 0:00**

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 22G103272

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications.

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. D.O		100 ppm		water	100 ppm
2. Conductivity		2760uS		414103	2760uS
3. pH7		pH 7.00		413995	pH 7.00
4. pH4		pH 4.00		414104	pH 4.00
5. ORP mV		234 72		418135/418134	234 5
6. Temp		22 4°C		MultiTherm	22.5°C

Calibrated by: [redacted]

Calibration date: 29-Apr-24

Next calibration due: 29-Oct-24

Oil / Water Interface Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument Solinst Interface Meter (30M)
Serial No. 485363

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested

Calibrated by: [redacted]

Calibration date: 01-May-24

Next calibration due: 31-Oct-24

ANZ

AECOM

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS OMP	**Project Number:**	60612963
Project Location:	RAAF Base Amberley	Client:	Defence
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:	Oakton
Make and Model	YSI Pro plus
Serial Number:	16E 105115

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7	2760	0	
Calibration Reading	4.0	7.01			
Calibration Temperature:	22.7	22.7			

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	4	7	2760	0	
Bump Test Reading	4.21	7.22	~~2791~~ 2497	0.21	
Bump Test Temperature:	22.7	22.3	22.2	22.1	

MV

22.8

23.3

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.

[redacted] — Fieldwork Staff Signature

10/4/24 — Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

AECOM

Q4AN(EV)-410-FM1

Project Name:	PFAS OMP	**Project Number:**	60612583
Project Location:	RAAF Base Amberley	**Client:**	Defence
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	Aquread
Make and Model:	IDE10315
Serial Number:	451 Pro plus

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	µpm	ppm
Calibration Standard Concentration:					
Calibration Reading:					
Calibration Temperature					

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:	4	7	2760	0	
Bump Test Reading	3.98	7.00	2481	0.18	
Bump Test Temperature	21.0	21.3	20.9	21.2	

Redox mV 227.2 20.6

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual instrument has been [redacted] and calibrated daily and bump tested as required by fieldwork staff.

[redacted]
Fieldwork Staff signature

11/4/24
Date

Distribution: Project Central File

ANZ

AECOM

FQM - Water Quality Meter Calibration Record

QHAN(EV)-410-FM1

Project Name:	PFAS CMP	Project Number:	60612563
Project Location:	RAAF Base Amberley	Client:	Defence
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	Aquaread
Make and Model:	Aq1 Pro plus
Serial Number	16E103415

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
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:	12/4/24				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4	7	2760	0	
Bump Test Reading	4.04	7.03	2511	10.17	
Bump Test Temperature:	19.8	19.9	19.7	19.7	

Redox mV 225.3 19.9

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.

12/4/24
Fieldwork Staff Signature

[redacted]
Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS Osp	**Project Number:**	60612583
Project Location:	RAAF Base Amberley	**Client:**	Defence
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:	Aicmet
Make and Model:	YSI PRO +
Serial Number:	16E103145

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	15/4/24; 0850.				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4	7	6100	0	
Calibration Reading:	4.02	6.95			
Calibration Temperature	21.2	21.2			

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:	4	7.	2876	0	
Bump Test Reading:	4.01	7.01	2561	0.21	
Bump Test Temperature	21.2	21.2	21.1	21.2	

Redox mV 223.6 21.2

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

15/4/24 — Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS CMP	**Project Number:**	60612563
Project Location:	RAAF Base Amberley	**Client:**	Defence
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	Aicnet
Make and Model:	YSI PRO +
Serial Number.	16E 103115

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4.0	7.0	2971	0	
Calibration Reading:	4.0	7.01			
Calibration Temperature:	21.2	21.2			

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:	4.0	7.0	2971	0.1	
Bump Test Reading	4.09	6.94			
Bump Test Temperature:	21.2	21.2	21.2	21.1	

Replaced WQM. 223.6 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

16/4/24
Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS OMP	Project Number:	60612563
Project Location:	RAAF Base Amberley	Client:	Defence
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:	Aimex
Make and Model:	YSI PRO +
Serial Number	16E103115

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.0	7.0	2701		
Calibration Reading:	4.0	7.0			
Calibration Temperature:	21.2	21.2			

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:	4.0	7.0	2761	0	
Bump Test Reading:	4.01	6.91	2562	0.11	
Bump Test Temperature:	21.0	21.0	21.1	21.1	

Redox mV

224.6

22.1

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☑ Each individual instrument has been assessed and calibrated daily and bump tested as required by fieldwork staff.

[redacted] — 17/4/24

Responsible Signature — Date

Distribution: Project Central File

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FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	PFAS QMF	**Project Number:**	60612563
Project Location:	RAAF Base Amberley	**Client:**	Defence
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:	Aermet
Make and Model:	YSI PRO PLUS
Serial Number:	16E 103 115

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration	4	7	2770	0	
Calibration Reading:	4.0	7.02			
Calibration Temperature	22.8	22.8			

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:	4	7	2770	0	
Bump Test Reading:	4.13	7.15	2491	0.22	
Bump Test Temperature:	22.8	22.8	22.8	22.8	

ORP
mV
222.1
227.

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided

Approval and Distribution

☑ Each recreational [redacted] bump tested as required by fieldwork staff.

[redacted] 18/4/24
Date

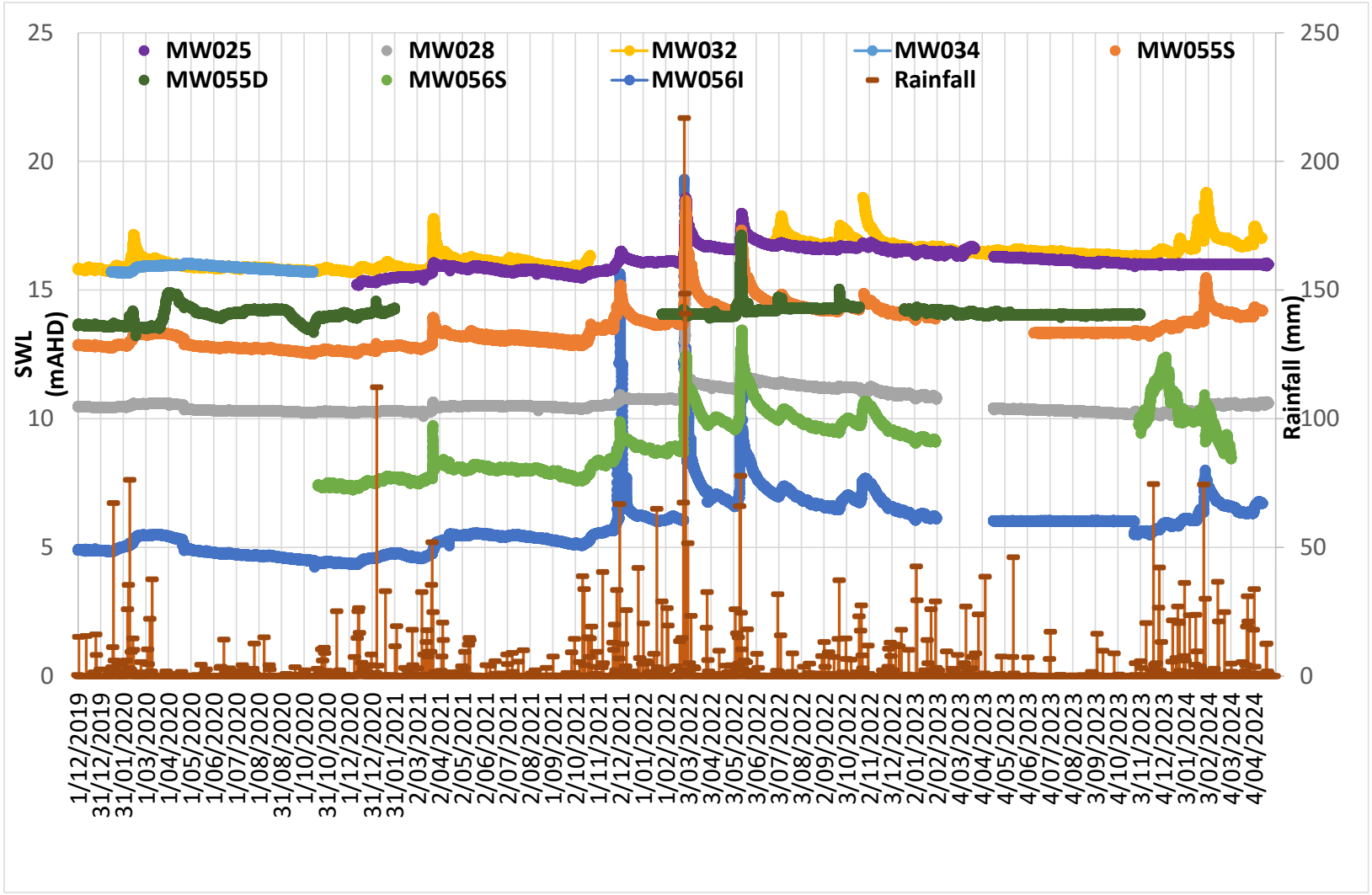
Distribution: Project Control File

Appendix G

Groundwater Level Data

Appendix G Groundwater Level Data

Chart G1 Groundwater Elevations and Rainfall December 2019 to April 2024



Prepared for
Department of Defence
ABN: 68 706 814 312

DRAFT

Well Installation and Maintenance Program - June to July 2024

PFAS OMP, South Queensland

23-Jul-2024
Doc No. 60612563_RP100_240723

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Well Installation and Maintenance Program - June to July 2024

PFAS OMP, South Queensland

Client: Department of Defence

ABN: 68 706 814 312

Prepared by

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23-Jul-2024

Job No.: 60612563

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 AS/NZS4801 and OHSAS18001.

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Quality Information

Document	Well Installation and Maintenance Program - June to July 2024
Ref	60612563_RP100_0_240723
Date	23-Jul-2023
Prepared by	[redacted]
Verified by	[redacted]

Revision History

Rev	Revision Date	Details	Approved	
			Name/Position	Signature
A	23-Jul-2024	Draft	[redacted]	

D R A F T

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Abbreviations

Term	Description
AMB	RAAF Base Amberley
AECOM	AECOM Australia Pty Ltd
BRY	Brymaroo Satellite Site
BYDA	Before You Dig Australia
DAM	Damascus Barracks
Defence	Department of Defence
ECC	Environmental Clearance Certificate
ESM	Environment and Sustainability Manager
GAL	Gallipoli Barracks
KOK	Kokoda Barracks
LOR	Limit of Reporting
mbgl	Metres below ground level
OMP	Ongoing Monitoring Program
PFAS	Per- and poly-fluoroalkyl substances
PFHxS	Perfluorohexane sulfonate
PFOA	Perflurooctanoic acid
PFOS	Perflurooctanesulfonic acid
QA / QC	Quality Assurance / Quality Control
QLD	Queensland
QWQMP	Queensland Water Quality Monitoring Program
SAQP	Sampling Analysis and Quality Plan
SHEMP	Safety, Health & Environment Monitoring Plan
SWA	Swartz Barracks

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1.0 Introduction

1.1 General

AECOM Australia Pty Ltd (AECOM) was engaged by the Department of Defence (Defence) to conduct groundwater monitoring well maintenance activities at the following six bases in Queensland:

- RAAF Base Amberley
- Gallipoli Barracks
- Damascus Barracks
- Swartz Barracks
- Brymaroo Satellite Site
- Kokoda Barracks.

The well maintenance activities included replacement of wells, decommissioning of redundant wells, repairs to standpipes or covers, unblocking wells and surveying of wells where standpipes have been altered. Defence provided AECOM with a list of wells requiring maintenance. The maintenance activities were described in a Sampling Analysis and Quality Plan (SAQP) (AECOM, 2024a), which was prepared to support the application of an Environmental Clearance Certificate (ECC) for the installation of replacement groundwater monitoring wells at RAAF Base Amberley.

1.2 Objectives

The purpose of the well maintenance program is to complete necessary repairs on monitoring wells used for per- and poly-fluoroalkyl substances (PFAS) monitoring programs. Groundwater monitoring wells at Defence bases are used to collect data to enable Defence to maintain an up to date understanding of the distribution, concentration and transport (migration pathways and flow) of PFAS in groundwater at these bases. The maintenance activities will assist with collecting ongoing data, maintain data quality and ensure longevity of the infrastructure. The well maintenance works will help future monitoring events to identify risks and inform Defence's approach to PFAS management.

2.0 Scope of Work

The maintenance activities were completed in general accordance with the SAQP (AECOM, 2024a) and safe system of work outlined in the Safety, Health and Environment Management Plan (SHEMP) (AECOM, 2024b). The scope of work for this maintenance event included the following activities:

- Preparation of an ECC and supporting SAQP for the monitoring well replacement works at RAAF Base Amberley and submission to the Environment and Sustainability Manager (ESM) for RAAF Base Amberley for approval.
- Decommissioning of six destroyed wells at RAAF Base Amberley and replacement with new monitoring wells, that are screened in same aquifer. Soil sampling of the soil bores (four soil samples per bore) and analysis for PFAS.
- Repairing of well casing / standpipes / well covers (monument or gatic covers) (up to 33 wells).
- Unblocking of wells that have been reported to have obstructions (up to 8 wells).
- Surveying of top of casing for wells where standpipes have been changed (up to 17 wells).
- Groundwater sampling of newly installed monitoring wells (requested by Defence on 01 July 2024).
- Preparation of this post activity report.

A summary of the work specified in the SAQP is shown in **Table 1**. Figures showing the well locations at each base are shown in **Figures 1-6** in **Appendix A**. Construction details of the new wells are provided in **Table T1**, **Appendix B**.

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Table 1 Well Maintenance Scope of Work

Well ID	New well ID	Decom-mission well	Drill new well	Repair well	Unblock well	Survey	Comment	Details (program*)
RAAF Base Amberley								
MW002	-	-	-	-	-	X	Survey well	Coordinates were previously not available (OMP).
MW004	-	-	-	X	-	X	Concrete base repair	Concrete base unstable and can be moved (QWQMP).
MW008	MW535	X	X	-	-	X	Replace damaged well	Decommission old well, drill replacement well, soil sample and analysis, well development and surveying (OMP).
MW009	MW536	X	X	-	-	X	Replace damaged well	Decommission old well, drill replacement well, soil sample and analysis, well development and surveying (OMP).
MW013	-	-	-	X	-		Cover / standpipe repair	Flush-mounted well cover shattered and head of pipe bent, can still be sampled (Other).
MW014	-	-	-	X	-	X	Standpipe repair	Standpipe cover broken off (QWQMP).
MW015	MW537	X	X	-	-	X	Replace damaged well	Decommission old well, drill replacement well, soil sample and analysis, well development and surveying (OMP).
MW016	-	-	-	-	X	-	Blocked well	Broken well, can only reach 13.23 metres below ground level (mbgl) before blockage (QWQMP).
MW018	MW538	X	X	-	-	X	Replace damaged well	Decommission old well, drill replacement well, soil sample and

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Well ID	New well ID	Decom-mission well	Drill new well	Repair well	Unblock well	Survey	Comment	Details (program*)
								analysis, well development and surveying (OMP).
MW019	-	-	-	X	-	X	Cover / standpipe repair	Stand pipe well cover unable to fit on piezometer, can still be sampled (Other).
MW021	-	-	-	X	-	X	Cover repair	Damaged gatic cover (QWQMP).
MW022	-	-	-	X	-	X	Standpipe repair	Standpipe in poor condition (QWQMP).
MW027	-	-	-	X	-	X	Standpipe repair	Standpipe snapped off at ground level, can still be sampled (Other).
MW039	MW539	X	X	-	-	X	Replace damaged well	Decommission old well, drill replacement well, soil sample and analysis, well development and surveying (OMP).
MW040	MW540	X	X	-	-	X	Replace damaged well	Decommission old well, drill replacement well, soil sample and analysis, well development and surveying (OMP).
MW042	-	-	-	X	-	-	Cover / standpipe repair	Damaged gatic cover (OMP).
MW046	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW047	-	-	-	X	-	-	Cover repair	Damaged gatic cover (OMP).
MW049	-	-	-	X	-	-	Raise gatic cover	Heavily vegetated – raise gatic cover (OMP).
MW050	-	-	-	X	-	-	Cover repair	Damaged gatic cover (OMP).
MW217	-	-	-	X	-	-	Cover / standpipe repair	Damaged gatic cover (QWQMP).
Swartz Barracks								
MW167	-	-	-	-	X	-	Blocked well	Blockage at 15.23 m (QWQMP).

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Well ID	New well ID	Decom-mission well	Drill new well	Repair well	Unblock well	Survey	Comment	Details (program*)
MW171	-	-	-	X	-	-	Cover repair	Missing gatic cover and cap (Defence).
MW178	-	-	-	-	X	-	Blocked well	Well blocked at 17.67m (QWQMP).
MW180	-	-	-	-	X	-	Blocked well	Well blocked at 13.20 m (QWQMP).
MW202	-	-	-	X	-	-	Cover repair	Cracked concrete (OMP).
MW230	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW265	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW266	-	-	-	X	-	-	Cover repair	Bolts require replacement (QWQMP).
MW271	-	-	-	-	X	-	Blocked well	Blocked well (OMP).
MW272	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW282	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW291	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW292	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
MW294	-	-	-	X	-	-	Cover repair	Gatic cover needs replacement (OMP).
MW300	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
Brymaroo Satellite Site								
MW001	-	-	-	X	-	X	Cover repair	Concrete damaged and requires repair (OMP).
MW006	-	-	-	X	-	-	Cover repair	Bolts require replacement (OMP).
Damascus Barracks								
MW002	-	-	-	X	-	X	Standpipe repair	Standpipe broken (Other).
MW004	-	-	-	X	-	-	Cover repair	Well cover broken (Other).
Gallipoli Barracks								
MW001	-	-	-	-	X	-	Well blocked	Well blocked at 10.033 m (Other).

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Well ID	New well ID	Decom-mission well	Drill new well	Repair well	Unblock well	Survey	Comment	Details (program*)
MW006	-	-	-	-	X	-	Well blocked	Well blocked at 10.325 m (Other)
MW010	-	-	-	X	-	-	Cover repair	No gatic cover (Other).
MW407 (Former MW026)	-	-	-	X	-	X	Expose well and install headworks	Located 0.5 m below new concrete hardstand (Other).
MW408 (Former MW027)	-	-	-	X	-	X	Expose well and install headworks	Located 0.5 m below new concrete hardstand (Other).
Kokoda Barracks								
MW001	-	-	-	X	-	X	Cover / Standpipe repair	Standpipe broken. The well is sampled by pushing the stand pipe and concrete base over to access the well cap and the standpipe. (Other).

Notes: * Monitoring program where well is used. OMP is Ongoing Monitoring Plan, QWQMP is Queensland Water Quality Monitoring Program (run by Downer), Other indicates wells are used by Defence for programs other than OMP and QWQMP.

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Changes to the scope of work included the following:

- One previously decommissioned well at RAAF Base Amberley (MW040) was not replaced as permission was not provided by the stakeholder (Defence Explosive Ordnance Facility) due to safety concerns regarding the storage of explosives. The stakeholder subsequently advised that a bore would not be permitted to be drilled within their compound.
- The following well covers were inspected and did not require structural repairs / unblocking or surveying:
    - RAAF Base Amberley
        - MW013 – Defence advised that the bore cover was shattered and the pipe head was bent. When inspected by AECOM in June 2024, the cover and pipe were found to be in good condition. A new well cap was placed on the well and additional grout was added around the PVC.
        - MW027 – Defence advised that the standpipe was snapped off. However, the well was found to be in good condition and no repairs were required.
    - Damascus Barracks
        - MW002 – bore could not be found and likely has been destroyed. There are no well details in ESdat, suggesting it has not been accessed for some time.
    - Swartz Barracks
        - MW171 – Defence advised that this well was missing a gatic cover and cap, however, the well was found to be a monument and in good condition.
        - MW167, MW178 and MW271 – these wells were found to be close to the original drilled total depth and were not blocked as previously reported.
        - MW270 was blocked. The blockage was removed in MW270 increasing the total depth by 9.75 m to approximately 20 mbgl.
    - Brymaroo
        - MW001 did not need surveying as the pipe position was not changed.
    - Gallipoli Barracks
        - MW407, MW408 - the description provided for these bores by Defence did not match the field setting. These wells were not located in a ’new’ concrete pad. No repairs to the well were identified. Development of MW407 increased the total depth by 3 m to 16.2 mbgl.
        - MW001 and MW006 – these wells were found to be close to the original drilled total depth and were not blocked as previously reported.
    - Kokoda Barracks
        - MW001 - Defence advised that repairs were required to the monument cover. Upon inspection by AECOM, this well was found to have a gatic cover not a monument cover. No monument cover was identified in ESdat or in the bore log. The gatic cover was cleaned out to improve visibility and access. ESdat has been updated.
- The following additional repairs or surveying were carried out:
    - RAAF Base Amberley
        - MW002 and MW004 – top of casing elevation of the standpipes were surveyed.

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- MW016 – Monument cover was found to be broken, monument cover was replaced and top of casing elevation of the standpipe was surveyed.
- MW021 – standpipe was surveyed.
- MW042 and MW217 standpipes were extended and top of casing for both wells resurveyed.
- MW046 – flush mounted gatic cover was replaced and the top of casing elevation for the well was resurveyed.

o Swartz Barracks

- MW266 and MW292 –gatic covers were replaced.

On 1 July 2024, Defence requested AECOM to conduct groundwater sampling of the five newly installed wells and analysis of the groundwater samples for PFAS. This task was not included in the SAQP and was undertaken in accordance with the OMP sampling protocols and AECOM standard operation procedures.

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3.0 Fieldwork

The drilling and maintenance fieldwork was completed between 3 and 18 June 2024. Groundwater sampling took place on 10 and 11 July 2024. The methodology used for well installation and well maintenance was in general accordance with the SAQP (AECOM, 2024a) and in accordance with the Minimum Construction Requirements for Water Bores in Australia (NUDLC, 2020). The ECC was approved by the ESM on 3 June 2024 (see **Appendix C**). Photographs of the wells following maintenance are shown in **Appendix D**.

3.1 Well Decommissioning, Groundwater Well Installation and Soil Sampling Methodology

The scope of work included decommissioning of up to six wells at RAAF Base Amberley followed by drilling of replacement wells (six planned but only five completed as described in **Section 2.0**) with soil samples collected for PFAS analysis.

Table 2 Methodology for Well Decommissioning, Soil Sampling, Groundwater Well Installation and Groundwater Sampling at RAAF Base Amberley

<table>
<tr><th>Item</th><th>Details</th></tr>
<tr><td>Well Decom-missioning</td><td>Four wells (MW008, MW009, MW018, MW039) were decommissioned by Proactive Drilling Services (Proactive) by removing well head equipment and pouring concrete into the PVC casing. The existing well PVC casing was cut below ground level with the concrete mixture added until overflowing the top of casing. A concrete plinth was made and covered with sand.
Wells MW015 and MW040 were not present and assumed to have been previously decommissioned. MW040 is not scheduled to be replaced as previously discussed in Section 2.0.</td></tr>
<tr><td>Drilling and well installation</td><td>A service location survey was undertaken on 30 May 2024 by IRT Tunks Pty Ltd using available Before You Dig Australia (BYDA) plans and Defence utility plans. Drilling took place between 3 and 7 June 2024. Service clearance with a hand auger and hand digging to a target depth of 1.5 m below ground level was conducted to remove soil while minimising potential damage to any existing utilities. The soil bores were advanced with a Geoprobe drilling rig for soil sampling of recovered material to the target depth (except MW039, which collapsed and was installed slightly shallower but in the same formation) via push tube and auger methods. Soil bore logs with monitoring well construction details are presented in Appendix E.
<table>
<tr><th>Bore / well</th><th>Replacing</th><th>Target Screen (mbgl)</th><th>Actual screened depth (mbgl)</th></tr>
<tr><td>BH535</td><td>MW008</td><td>8.5 – 13.5</td><td>8.5 – 13.5</td></tr>
<tr><td>BH536</td><td>MW009</td><td>6.5 – 10.5</td><td>6.5 – 10.5</td></tr>
<tr><td>BH537</td><td>MW015</td><td>15.0 – 19.0</td><td>15 – 19.0</td></tr>
<tr><td>BH538</td><td>MW018</td><td>13.5 – 17.0</td><td>13.5 – 17.0</td></tr>
<tr><td>BH539</td><td>MW039</td><td>14.5 – 17.5</td><td>12.0 – 15.0</td></tr>
</table></td></tr>
<tr><td>Soil sampling</td><td>Samples were collected near the surface (0.1, 0.5 and 1.0 mbgl) and at approximately 1.0 m intervals thereafter to the target depth. Four from each of the five wells were selected for PFAS laboratory analysis. This included three soil samples from the near surface and one sample from the saturated zone. As the primary purpose of the sampling was to assess PFAS in soils, no field screening methodologies (such as photoionisation detector) were used.</td></tr>
<tr><td>Well developme nt</td><td>Wells were developed following installation using a decontaminated steel hand bailer between 11 and 13 June 2024. The records from well development are presented in Appendix F. Depth to groundwater was measured using an IP and observations of</td></tr>
</table>

D R A F T

Item	Details
	water quality (electrical conductivity, dissolved oxygen, pH, oxidation reduction potential and temperature) were measured using a calibrated water quality meter during development. Equipment calibration certificates are presented in **Appendix G**.
Waste soil	Soil cuttings and purged groundwater were placed into drums and removed off-site by Proactive. Transport records are pending.
Surveying	Installed groundwater wells were surveyed by a licensed sub-contractor (Saunders Havill) on 17-18 June 2024. The coordinates and levels are presented in **Table T1** in **Appendix B** and on bore logs presented in **Appendix E**. The surveying report is presented in **Appendix H**.
Ground-water sampling	HydraSleeves™ were installed in the five new monitoring wells (MW535-MW539) on 10 July 2024. Sampling took place on 11 July 2024 (at least 24 hours after installation of HydraSleeves™) with samples analysed for PFAS. Depth to groundwater and water quality field parameters (for temperature, dissolved oxygen, pH, electrical conductivity, oxidation reduction potential) were measured prior to sampling. Sampling field sheets are presented in **Appendix F**. Calibration certificates are presented in **Appendix G**.
Laboratory analysis	All primary samples were submitted for PFAS suite analysis using the standard limit of reporting (LOR). Eurofins Brisbane, Queensland was used as the primary laboratory. ALS Brisbane was used as the secondary laboratory. Eurofins and ALS methods for soil analyses were certified by the NATA. Chain of custody forms are presented in **Appendix I**, laboratory analytical certificates are presented in **Appendix J**.
QA / QC samples	Field Quality Assurance / Quality Control (QA / QC) samples collected included intra-laboratory duplicate and inter-laboratory duplicate samples (i.e. splits), rinsate blank samples and trip blanks. The inter-laboratory duplicate sample collected during the water sampling on 11 July 2024 was lost during transport between ALS and Eurofins. Refer to **Appendix K** for assessment of QA / QC sample data.

3.2 Well Repairs and Surveying

Table 3 below summarises the maintenance activities completed.

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Table 3 Well maintenance details

Monitoring well	Details
Gatic cover / monument cover / concrete / standpipe repairs	• AMB – MW004 – Concrete base and standpipe repaired. • AMB – MW013 – Cover repaired and new J cap installed. • AMB – MW014 – Monument cover replaced. • AMB – MW016 – Monument cover and standpipe replaced. • AMB – MW019 – Cover and standpipe repair. • AMB – MW021 – Cover repair. • AMB – MW022 – Standpipe repair. • AMB – MW027 – Standpipe was in good condition and no repairs required. New J cap installed. • AMB – MW042 – Standpipe extended. • AMB – MW046 – Cover repair. • AMB – MW047 – Cover repair. • AMB – MW049 – well found and gatic cover raised. • AMB – MW050 – Cover repair. • AMB – MW217 – Cover repair. • BRY – MW001 – Cover in suitable condition. Grout added to headworks. • SWA – MW202 – gatic cover replaced. • SWA – MW266 – gatic cover replaced. • SWA – MW292 – gatic cover replaced. • SWA – MW294 – gatic cover replaced. • SWA – MW171 – cover was in good condition. No repair required. • GAL – MW407– cover was in good condition and not covered in ‘new’ concrete. J cap installed. • GAL – MW408 - cover was in good condition and not covered in ‘new’ concrete. Well was developed with total depth increased from 13.2 mbgl to 16.2 mbgl. • GAL – MW010 – new J cap and seal. • DAM – MW002 – bore could not be found and likely has been destroyed. • DAM – MW004 – new monument cover installed and standpipe. • KOK – MW001 – standpipe was in good condition and no repairs required.
Bolts replaced on cover	• AMB – MW046 – bolts replaced. • SWA – MW230, MW265, MW272, MW282, MW291, MW300 – bolts replaced. • BRY – MW006 – bolts replaced.
Unblocking wells	• AMB – MW016 - well was unblocked. • SWA – MW167, MW178, Wells were not blocked. No repairs required. • SWA - MW180 – well was unblocked with additional 2 m total depth. • SWA – MW270 – well was unblocked. • GAL – MW001, MW006 – Wells were not blocked. No repairs required.
Surveying	• AMB – MW002, MW004, MW014, MW016, MW019, MW021, MW022, MW042, MW046, MW217, MW535, MW536, MW537, MW538, MW539. • DAM – MW004.

Note: AMB is RAAF Base Amberley, SWA is Swartz Barracks, BRY is Brymaroo, GAL is Gallipoli Barracks, DAM is Damascus Barracks, KOK is Kokoda Barracks.

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4.0 Results

4.1 Bore Logs and Field Observations

Bore logs for the new five monitoring wells are shown in **Appendix E**. Construction details are summarised in **Table T1**, **Appendix B**. There were no visible or olfactory evidence of contamination during the drilling of the wells.

4.2 Surveying Results

The new coordinates and top of casing measurements are shown in **Table T2** in **Appendix B**.

4.3 Soil Sample Analytical Results

The table below summarises the soil results for PFAS. Analytical results are presented in **Table T3** in **Appendix B** with laboratory reports presented in **Appendix J**.

Table 4 Soil Analytical Results

Bore / well	Screened depth (mbgl)	Samples Analysed for PFAS (mbgl)	PFAS Results
MW535	8.5 – 13.5	0.1, 0.5, 1.0, 8.0	• PFAS <LOR in 3 samples (0.1mbgl, 1.0 mbgl and 8.0 mbgl). • 0.0085 mg/kg PFOS in sample from 0.5 mbgl.
MW536	6.5 – 10.5	0.1, 0.5, 1.0, 8.0	• PFAS < LOR in 2 samples (1.0 mbgl and 7.0 mbgl). • 0.0073 mg/kg PFOS in sample from 0.1 mbgl • 0.014 mg/kg PFOS in sample from 0.5 mbgl
MW537	15 – 19.0	0.1, 0.5, 1.0, 9.0	• PFAS < LOR in 3 samples (0.1 mbgl, 0.5 mbgl, 9.0 mbgl). • 0.290 mg/kg PFOS at 1.0 mbgl and exceeding the ecological direct exposure criteria (HEPA, 2020).
MW538	13.5 – 17.0	0.2, 0.5, 1.0, 15.0	• PFAS <LOR in 3 samples (0.5 mbgl, 1.0 mbgl, 15.0 mbgl). • 0.0011 mg/kg PFOS at 1.0 mbgl.
MW539	12.0 – 15.0	0.2, 0.5, 1.0, 14.0	• PFAS <LOR in all samples.

PFHxS or PFOS were detected in five of the 16 soil samples analysed. Results have been assessed against HEPA (2020) human health (for industrial / commercial landuse) and ecological (direct and indirect) guideline values for PFHxS+PFOS, PFOS and PFOA. There were no exceedances of the human health guidelines in the soil samples. There were no exceedances of the ecological direct exposure guideline and one exceedance of the ecological indirect exposure guideline for PFOS (100 µg/kg) in the sample from MW537 at 1.0 mbgl (290 µg/kg).

4.4 Groundwater Gauging and Observations

Depth to groundwater, groundwater elevations water quality parameter results and observations for sampling of the five monitoring wells MW535 to MW539 on 11 July 2024 are presented in **Table T4**, **Appendix B**.

D R A F T

4.5 Groundwater Analytical Results

Table 5 below summarises the groundwater analytical results for PFHxS, PFOS and PFOA for samples analysed for PFAS. Analytical results are presented in **Table T5** in **Appendix B** with laboratory reports presented in **Appendix J**.

Table 5 Groundwater Analytical Results

Well	Replacing	PFOS+PFHxS (ug/L)	PFOA (ug/L)	First-time detections or new exceedances
MW535	MW008	<0.01	<0.01	None
MW536	MW009	1.56	0.08	None
MW537	MW015	0.44	0.02	None
MW538	MW018	0.05	<0.01	None
MW539	MW039	4.26	0.04	First time detection of PFOA as not previously detected in MW039.

Results have been assessed against HEPA (2020) human health (drinking water and recreational water) and ecological guideline values for PFHxS+PFOS, PFOS and PFOA.

Compared to the historical groundwater results for the wells that were replaced, there was one first-time detections of PFOA (0.04 µg/L) in the groundwater sample from MW539. There were no first-time exceedances in the dataset.

There were three exceedances of the drinking water guideline value for sum of PFOS and PFHxS (MW536, MW537 and MW539) and one exceedance of the recreational water guideline value (MW539) for the newly installed wells, however the results were consistent with the wells that they replaced. There were no exceedances of the drinking water or recreational water guideline value for PFOA.

The ecological guideline value for the protection of freshwater ecosystems (99% species protection level) for sum of PFOS+PFHxS was exceeded in four groundwater samples (MW536-539). There were no exceedances of the PFOA guideline value.

4.6 Analytical Data Validation

The data quality objectives and data quality indicators adopted for these works are presented in the SAQP (AECOM, 2024a).

Data validation assessment is provided in **Appendix K**. 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.

All data collected during this event has been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual (Defence, 2018) Annex L Guidance on Data Management (amended 2021) requirements.

5.0 Summary

Well maintenance tasks and soil and groundwater sampling activities were completed at six bases in June and July 2024 as documented in this report.

A copy of this report has been provided to the ESM as part of the ECC close out. Defence ESdat has been updated to reflect the latest well information for these wells.

D R A F T

6.0 References

AECOM, 2024a, *PFAS OMP – South East Queensland Well Maintenance, Sampling and Analysis Quality Plan*, Rev 0, 3 June 2024.

AECOM, 2024b, *Safety, Health and Environment Management Plan – Groundwater Well Maintenance and Replacement*, Rev 0, 27 May 2024.

Department of Defence, 2021, *Contamination Management Manual,* (2018, amended 2021)

HEPA, 2020, *PFAS National Environmental Management Plan*, Version 2 – January 2020.

NUDLC, 2020, *Minimum Construction Requirements for Water Bores in Australia*, Fourth edition, 2020.

Appendix A

Figures

D R A F T

Figures

Figure 1 RAAF Base Amberley Well Locations

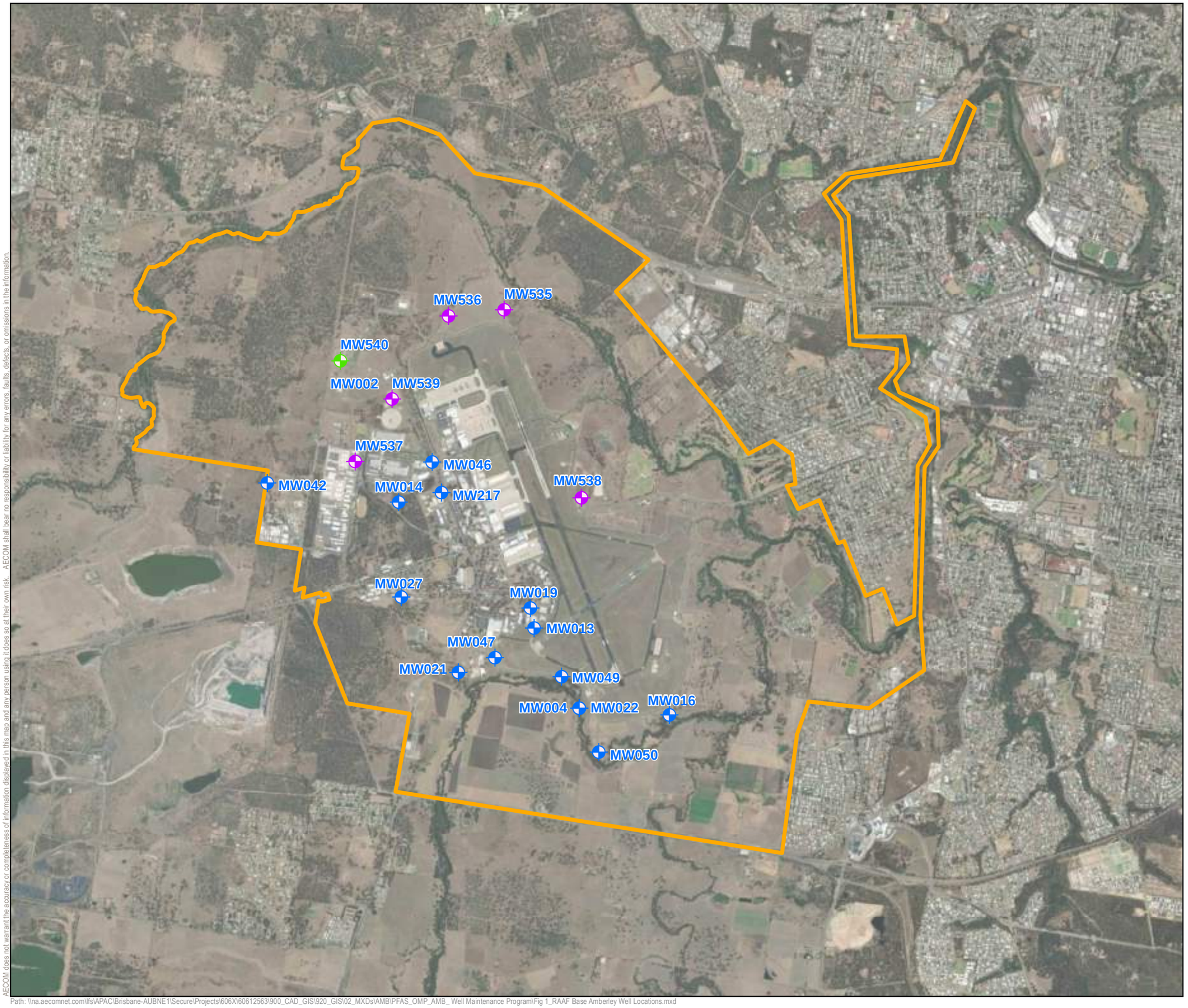
Figure 2 Swartz Barracks Well Locations

Figure 3 Brymaroo Satellite Site Well Locations

Figure 4 Gallipoli Barracks Well Locations

Figure 5 Damascus Barracks Well Locations

Figure 6 Kokoda Barracks Well Locations



LEGEND

- Management Area
- Monitoring well - replaced
- Monitoring well - not installed
- Monitoring well - maintenance

0 0.5 1 km

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SCALE 1:35,000

SIZE A3

SHEET -

COORDINATE SYSTEM GDA 1994 MGA Zone 56

TITLE

FIGURE 1 RAAF BASE AMBERLEY WELL LOCATIONS

PROJECT

WELL INSTALLATION AND MAINTENANCE REPORT

CLIENT

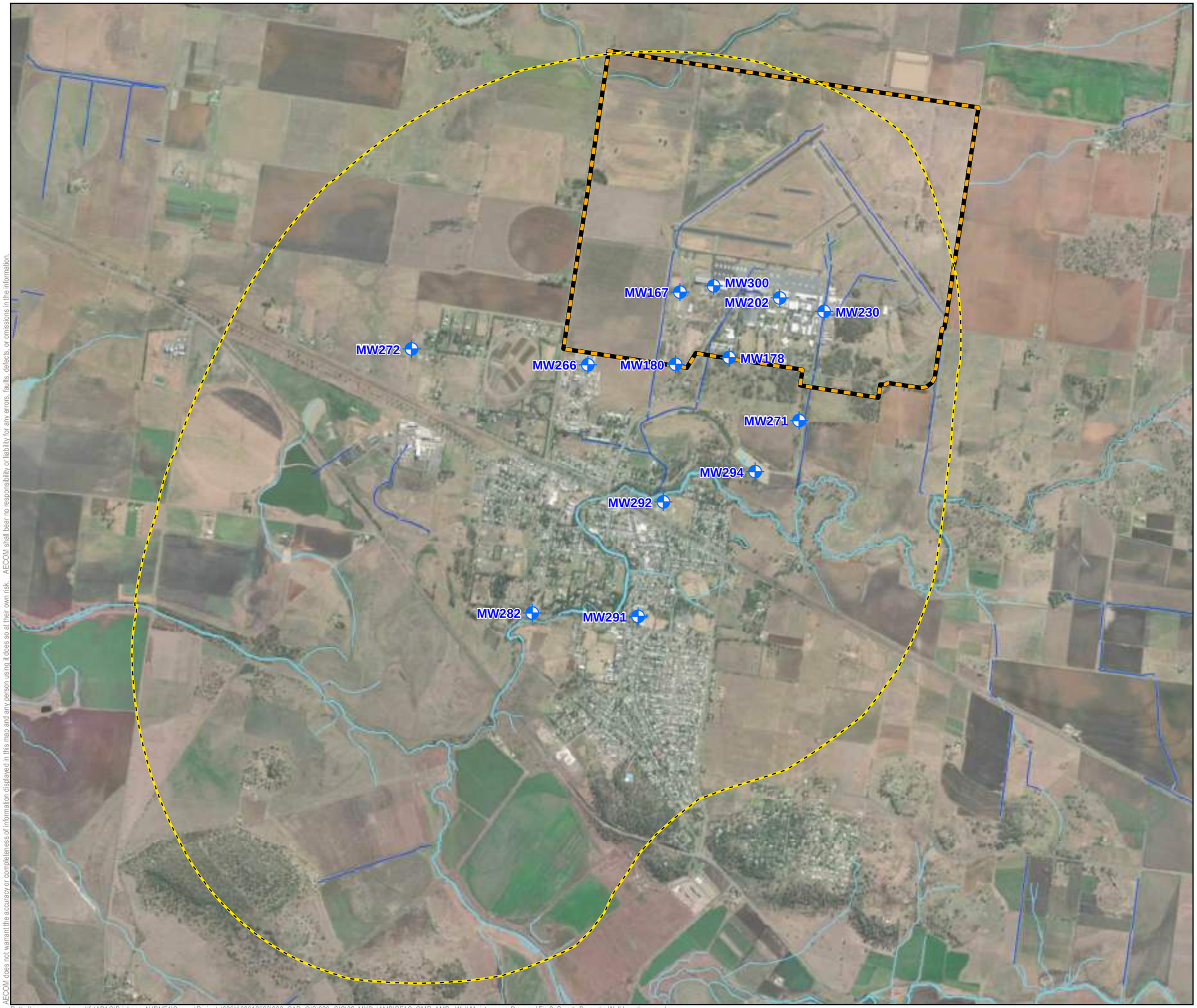
DEPARTMENT OF DEFENCE

Disclaimer Spatial data used under licence from The State of Queensland 2017. Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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DATUM GDA 1994. PROJECTION MGA ZONE 56

0 0.25 0.5 1 km

1:32,000 (when printed at A3)

- Monitoring Well - maintenance
- Site Boundary
- Management Area

Data sources:

Base Layers: ESRI Basemaps Online
Street, Drainage Lines, Locality, Features: @ Street Pro 2011
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FIGURE 2 SWARTZ BARRACKS WELL LOCATIONS

WELL INSTALLATION AND MAINTENANCE REPORT

PROJECT ID	60612563
CREATED BY	BM
LAST MODIFIED	james.peachey; 2/07/2024
VERSION:	2

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DATUM GDA 1994. PROJECTION MGA ZONE 56

N

0 10 20 40 60 Meters

1:1,800 (when printed at A3)

Brymaroo Satellite Site

Monitoring Wells - maintenance

Data sources:

Base Layers: ESRI Basemaps Online
Street, Drainage Lines, Locality, Features: @ Street Pro 2011
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FIGURE 3 BRYMAROO SATELLITE SITE WELL LOCATIONS

WELL INSTALLATION AND MAINTENANCE REPORT

PROJECT ID	60612563
CREATED BY	BM
LAST MODIFIED	2/07/2024
VERSION:	1

A3 size

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152°58'0"E
152°58'30"E
152°59'0"E
27°25'30"S
27°26'0"S

MW407
MW408
MW010
MW001
MW006
Sandy Creek
Enoggera Creek

AECOM

Coordinate System: GCS GDA 1994 Datum: GDA 1994

0 100 200 m

1 cm = 90 m (when printed @ A3)

Legend

- Monitoring Well - maintenance

FIGURE 4 GALLIPOLI BARRACKS WELL LOCATIONS

WELL INSTALLATION AND MAINTENANCE REPORT

PROJECT #:	60641279 - QLD
CREATED BY:	ScottA3
LAST MODIFIED:	1/02/2022
VERSION:	H

A3 size

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153°6'0"E

27°25'30"S



153°6'0"E

AECOM

Coordinate System: GCS WGS 1984 Datum: WGS 1984

N

0 50 100 m

1 cm = 40 m (when printed @ A3)

Legend

Monitoring well - maintenance

FIGURE 5 DAMASCUS BARRACKS WELL LOCATIONS

WELL INSTALLATION AND MAINTENANCE REPORT

PROJECT #:	60553102 - QLD
CREATED BY:	BM
LAST MODIFIED:	5/04/2019
VERSION:	C

A3 size

Document Path: \\aubne1fp003\Projects\605X\60553102\4. Tech Work Area\4.99 GIS\02_Mxd\Y2018\ReportMapsPerSite_Stage1\QLD_0134_DamascusIQLD_0134_Damascus_F02_PropertyLayout.mxd



AECOM

Coordinate System: GCS GDA 1994 Datum: GDA 1994

F

0 7 14 Meters

1 cm = 5 m (when printed @ A3)

Legend

@ Monitoring Well - maintenance

FIGURE 6 KOKODA BARRACKS WELL LOCATIONS

WELL INSTALLATION AND MAINTENANCE REPORT

PROJECT #:	60553102 - QLD
CREATED BY:	joel.bryant
LAST MODIFIED:	6/03/2020
VERSION:	3

Document Path: P:\605X\60553102\4. Tech Work Area\4.99 GIS\02_Mxd\Y2018\ReportMaps\PerSite_Stage1\QLD_0145_KokodaBarracksCanungra\DRAFT C\QLD_0145_KokodaBarracksCanungra_F4-11_HistoricalExceedances_v3.mxd

A3 size

D R A F T

Appendix B

Tables

D R A F T

Appendix B Tables

Table T1 Construction Details of New Wells Installed at RAAF Base Amberley
Table T2 Surveying Results
Table T3 Soil PFAS Analytical Results
Table T4 Groundwater Gauging and Water Quality Parameter Results
Table T5 Groundwater PFAS Analytical Results

Well	Replacing Well	Date of Installation	Easting	Northing	Top of Casing Elevation (mAHD)	Ground Elevation (mAHD)	Cover	Aquifer	Drilled Depth (m)	Top of screen (mbgs)	Base of screen (mbgs)
Construction Details of Wells Drilled at RAAF Base Amberley											
0861_MW535	0861_MW008	6/06/2024	470917.465	6945406.005	25.331	24.589	Monument	Alluvium	13.5	8.50	13.50
0861_MW536	0861_MW009	7/06/2024	470347.726	6945355.3	25.17	24.346	Monument	Alluvium	10.5	6.50	10.50
0861_MW537	0861_MW015	4/06/2024	469532.603	6943921.23	34.781	34.758	Gatic	Tertiary Formation	19.0	15.00	19.00
0861_MW538	0861_MW018	5/06/2024	471661.936	6943517.999	25.218	24.395	Monument	Alluvium	17.0	13.50	17.00
0861_MW539	0861_MW039	3/06/2024	469819.558	6944542.79	30.288	29.431	Gatic	Tertiary Formation	17.5	12.00	15.00

Notes:
mAHD is metres above Australian Height Datum
m is metres
mbgs is metres below ground surface

Monitoring Well	Cap Easting	Cap Northing	Top of Casing Elevation (mAHD)	Ground Elevation (mAHD)	Well Level (mAHD)
RAAF Base Amberley					
0861_MW002	469126.593	6944672.519	36.066	35.209	35.766
0861_MW004	471755.791	6941559.349	27.811	26.928	27.728
0861_MW535	470917.465	6945406.005	25.331	24.589	25.266
0861_MW536	470347.726	6945355.3	25.17	24.346	25.082
0861_MW014	470029.74	6943458.368	31.962	31.055	31.844
0861_MW537	469532.603	6943921.23	34.781	34.758	34.703
0861_MW016	472507.709	6941525.09	27.072	26.059	26.94
0861_MW538	471661.936	6943517.999	25.218	24.395	25.127
0861_MW019	471234.407	6942556.404	27.185	27.181	27.104
0861_MW021	471234.407	6942556.404	20.939	20.902	20.582
0861_MW022	471645.997	6941548.274	19.599	18.772	19.492
0861_MW539	469819.558	6944542.79	30.288	29.431	30.192
0861_MW042	468619.527	6943728.819	40.109	40.076	40.03
0861_MW046	470218.076	6943933.809	26.239	26.176	26.095
0861_MW217	470324.309	6943616.693	28.922	28.859	28.846
Damascus Barracks					
0861_MW004	509749.415	6966306.959	3.189	2.354	3.105

		∑(PFHxS + PFOS)	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS
	Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	LOR	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	10	5	10	5	5
PFAS NEMP (HEPA, 2020) Industrial / commercial (HIL D)		**20000**											**50000**																	
PFAS NEMP (HEPA, 2020) Ecological direct exposure							**1000**						**10000**																	
PFAS NEMP (HEPA, 2020) Ecological indirect exposure							100																							

Field_ID	Depth (m)	Date	Lab Report	Type																												
0861_MW535_0.1_240606	0.1	6/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW535_0.5_240606	0.5	6/06/2024	1106398-S	Normal	12.9	<5	<5	6.5	<5	6.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_QC101_240606	0.5	6/06/2024	1106398-S	Duplicate	14.5	<5	<5	6.0	<5	8.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_QC201_240606	0.5	6/06/2024	1106398-S	Triplicate	14.4	0.9	0.8	7.7	0.2	6.7	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.05	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5
0861_MW535_1.0_240606	1.0	6/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW535_8.0_240606	8.0	6/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW536_0.1_240607	0.1	7/06/2024	1106398-S	Normal	7.3	<5	<5	<5	<5	7.3	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW536_0.5_240607	0.5	7/06/2024	1106398-S	Normal	14	<5	<5	<5	<5	14	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW536_1.0_240607	1.0	7/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW536_7.0_240607	7.0	7/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW537_0.1_240604	0.1	4/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW537_0.5_240604	0.5	4/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW537_1.0_240604	1.0	4/06/2024	1106398-S	Normal	319	<5	<5	29	<5	290	<5	<5	<5	10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW537_9.0_240604	9.0	4/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW538_0.2_240605	0.2	5/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_QC100_240605	0.2	5/06/2024	1106398-S	Duplicate	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_QC200_240605	0.2	5/06/2024	1106398-S	Triplicate	1.3	<0.2	<0.2	0.2	<0.2	1.1	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.05	<0.2	<0.5	<0.5	<0.5	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5
0861_MW538_0.5_240605	0.5	5/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW538_1.0_240605	1.0	5/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW538_15.0_240605	15.0	5/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW539_0.2_240603	0.2	3/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW539_0.5_240603	0.5	3/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW539_1.0_240603	1.0	3/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5
0861_MW539_14.0_240603	14.0	3/06/2024	1106398-S	Normal	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10	<5	<5

Notes
µg/kg' is micrograms per kilogram
m: is metres
'<' is less than limit of reporting
'-' not analysed
LOR is limit of reporting
NEPM is National Environmental Protection Measure
HIL-D is Health Investigation Level for commercial / industrial landuse
PFAS NEMP is PFAS National Environmental Management Plan
HEPA is Heads of Environmental Protection Agencies

Well	Easting	Northing	Top of Casing Elevation (mAHD)	Aquifer	Date of HydraSleeve™ Installation	Date of Monitoring	Total Depth (mbgl)	Depth HydraSleeve installed (mbgl)	Depth to Groundwater (mbgl)	Groundwater Elevation (mAHD)	Dissolved Oxygen (mg/L)	pH	Electrical Conductivity (µS/cm)	Total Dissolved Solids	Oxidation Reduction Potential (mV)	Corrected Oxidation Reduction Potential (mV)	Temperature (ºC)	Colour	Odour	Sheen
0861_MW535	470917.465	6945406.005	25.331	Alluvium	10/07/2024	11/07/2024	13.50	13.00	8.90	16.43	3.46	7.12	2147	1396	136.2	341.2	21.8	Clear, pale yellow	None	None
0861_MW536	470347.726	6945355.3	25.17	Alluvium	10/07/2024	11/07/2024	10.50	10.00	7.70	17.47	3.12	7.42	2675	1739	129.9	334.9	21.4	Clear, pale yellow	None	None
0861_MW537	469532.603	6943921.23	34.781	Tertiary Formation	10/07/2024	11/07/2024	19.00	18.50	15.05	19.73	3.02	6.38	25997	16898	193.6	398.6	23.5	Clear, no colour	None	None
0861_MW538	471661.936	6943517.999	25.218	Alluvium	10/07/2024	11/07/2024	17.00	16.50	11.90	13.32	2.26	6.14	16178	10516	182.2	387.2	22.8	Clear, no colour	None	None
0861_MW539	469819.558	6944542.79	30.288	Tertiary Formation	10/07/2024	11/07/2024	17.50	17.00	10.90	19.39	6.04	6.29	4717	3066	156.3	361.3	22.7	Clear, pale yellow	None	None

Notes:
mAHD is metres above Australian Height Datum
m is metres
mbgl is metres below ground level
mg/L is milligrams per litre
µS/cm is microSiemens per centimetre
mV is millivolt
ºC is degrees Celsius

			Perfluoroalkyl Sulfonic Acids						Perfluoroalkyl Carboxylic Acids											Perfluoroalkyl Sulfonamides							Fluorotelomer Sulfonic Acids				
		Sum of PFHxS and PFOS	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFDS	PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnDA	PFDoDA	PFTrDA	PFTeDA	FOSA	MeFOSE	EtFOSE	MeFOSA	EtFOSA	MeFOSAA	EtFOSAA	4:2 FTS	6:2 FtS	8:2 FTS	10:2 FTS	Sum PFAS
	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	EQL	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.1	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.05	0.05	0.05	0.05	0.02	0.02	0.05	0.05	0.05	0.05	0.01
PFAS NEMP (HEPA, 2020) Drinking Water		**0.07**											**0.56**																		
PFAS NEMP (HEPA, 2020) Freshwater 95%							***0.13***						***220***																		
PFAS NEMP (HEPA, 2020) Freshwater 99%							*0.00023*						*19*																		
Field ID	**Well**	**Date**	**Sample Code**	**Sample Type**																												
0861_MW535_240711	MW535	11 Jul 2024	EB2423759001	Normal	*<0.01*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.01*	*<0.02*	*<0.1*	*<0.02*	0.02	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.02*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	*<0.01*
0861_MW536_240711	MW536	11 Jul 2024	EB2423759002	Normal	**1.56**	0.1	0.1	0.62	0.02	***0.94***	*<0.02*	0.1	0.2	0.24	0.07	0.08	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.02*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	2.47
0861_MW537_240711	MW537	11 Jul 2024	EB2423759003	Normal	**0.44**	0.34	0.19	0.26	*<0.02*	***0.18***	*<0.02*	0.2	0.12	0.38	0.03	0.02	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.02*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	1.72
0861_MW538_240711	MW538	11 Jul 2024	EB2423759004	Normal	0.05	*<0.02*	*<0.02*	0.05	*<0.02*	*<0.04*	*<0.02*	*<0.1*	*<0.02*	*<0.02*	*<0.02*	*<0.01*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.02*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	0.05
0861_MW539_240711	MW539	11 Jul 2024	EB2423759005	Normal	**4.26**	3.73	2.44	4.26	*<0.02*	*<0.01*	*<0.02*	0.6	0.88	3.85	0.28	0.04	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.02*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	16.1
0861_QC100_240711	MW539	11 Jul 2024	EB2423759006	Duplicate	**4.1**	3.96	2.3	4.1	*<0.02*	*<0.01*	*<0.02*	0.6	0.9	3.87	0.27	0.04	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.02*	*<0.05*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.02*	*<0.02*	*<0.05*	*<0.05*	*<0.05*	*<0.05*	16.0

LOR is limit of reporting
µg/L is micrograms per litre
'-' denotes no analysis undertaken
'<' denotes concentration is less than
NEMP is National Environmental Mangement Plan
HEPA is Heads of Environmental Protection Agencies
Denotes first time detection above LOR
Denotes new exceedance of human health guideline values

Appendix C

Environmental Clearance Certificate

Environmental Clearance Certification



Instructions for Completion

General

This form (AB081) will be used by proponents responsible for conducting projects/activities on Defence land that require an Environmental Clearance Certificate (ECC).

- Proponents will take a precautionary approach, and discuss the project/activity with the ADES/ESM to determine if an ECC is required.
- The ADES/ESM should be consulted as early as possible and can assist with risk identification and the development of appropriate mitigation measures, so that activity can proceed with minimal restrictions and delays.
- An approved ECC issued by the ESM and countersigned (approved) by the ADES provides a record that the environmental impacts of a Defence action have been identified and has been assessed as not likely to cause significant environmental impacts under the EPBC Act.

Completing the ECC

The ECC will be completed by the Action Authority (i.e. the proponent) in consultation with the ADES/ESM to identify all environmental impacts and mitigation measures for the proposed activity. Upon completion of Sections A and B, the ADES/ESM and responsible Defence person will agree on the mitigation measures and conditions of approval, and sign that only the proposed action described in the certificate is to take place.

Activity
Step 1 - Appoint an Environmental Liaison Officer (ELO) • The ELO will be responsible for liaison with the ADES/ESM and ensuring that the ECC requirements are communicated to all personnel involved in the project/activity, incident control and post-activity reporting.
Step 2 - Contact the ADES/ESM to discuss the proposed activity, and to arrange a meeting if required • Initial contact with the ADES/ESM should be made no later than 10 working days prior to a proposed activity if possible. • For larger activities, (eg. Major Ex's, Major Capital Facilities), the ADES/ESM should be contacted at the earliest opportunity (eg. Facility concept planning, Ex planning), and no later than 20 working days prior to the proposed start date.
Step 3 - Section A - Proposed Action Fill in Section A , including: • **Description of the proposed action:** - Provide information on the location of all activity components, examples are given. • **Mitigation Measures:** - The Action Authority shall insert mitigation measures that will be implemented to manage project/activity risks. - In some cases the Action Authority will be directed to develop an Environmental Management Plan (EMP) outlining site specific mitigation measures, responsibility, personnel responsible, timeframes for implementation, monitoring and reporting. - This section can cross reference an EMP and other standards/procedures where relevant instead of repeating information.
Step 4 - Section B - Clearance • Email the ECC form with completed Section A to the ADES/ESM along with all reference documentation i.e. EMP. • The ADES/ESM will review the proposal and mitigation measures, and specify conditions in the ECC. • The ADES/ESM will then consult with the Defence person responsible for the activity and when both parties are satisfied the ADES/ESM will sign the ECC and return to the Action Authority. • Project/Activity now provided with environmental approval to proceed.
Step 5 - Section C - Commitment to Comply • The Action Authority or appointed representative is to review the ECC conditions and sign Section C Commitment to Comply. • The Project Manager/Contractor must then Email the fully signed form back to the ADES/ESM.
Step 6 - Undertake all activities in accordance with conditions of the ECC.
Step 7 - Section D - Post Activity Report • Upon completion of the activity, complete the Section D Post Activity Report (PAR) provided with the ECC and submits to the ADES/ESM **within 10 working days of activity completion**. **Note:** conditions within the ECC and PAR may require a ADES/ESM to be on site when Section D is being completed. • The ADES/ESM or their delegate must counter sign Section D provided the activity is deemed complete and the conditions of the ECC have been met.

Security Classification

When certificates are rendered on classified equipment or when details of a classified nature are included, the certificate is to be given an appropriate classification marking.

Environmental Clearance Certification

Section A – Proposed Action *(To be completed by Action Authority)*

Service, Group or Organisation	Unit	File Reference (*Defence to insert)*
	[redacted]	**SQECC3669**

Title: RAAF Base Amberley, Monitoring Well Replacement

Location: RAAF Base Amberley, South Amberley Road, Amberley QLD 4306.

Duration: Between 3/06/2024 and 24/06/2024

Project Activity: Six existing groundwater monitoring wells used in groundwater monitoring programs (PFAS OMP and QLD WQMP) are no longer operational and require replacement. 12 groundwater monitoring wells will require well head cover repair and 1 groundwater monitoring well requires unblocking. This ECC covers the monitoring well replacement, geo-environmental testing and well head repair. The monitoring wells are located at various locations across the Base including at the northern perimeter road, explosive ordnance compound and eastern gate crash location.

Scope:
Decommission six existing groundwater monitoring wells, service locate and re-drilling new monitoring wells nearby (5-10m from existing well) for geo-environmental investigation to assess PFAS concentrations in groundwater and soil. 12 well head repairs on groundwater monitoring wells and one bore to be unblocked.

Soil analytical schedule includes:
- PFAS plus TOPA at samples from each of 6 soil bores at 0-0.1 and at approximately 0.5 mbgl with just PFAS analysed at 6 samples collected at 1.0 mbgl.

The next page shows a map of RAAF Base Amberley illustrating the work site locations and access routes to each site.

See below for details and location of replacement groundwater monitoring well.

Current Well ID	Location	Easting	Northing	Well Depth (mbgl)	Casing Diameter (mm)	Drilling Method	Finish
MW08	On-base	470915.5	6945409	13.5	50	Hand auger/vacuum truck + Push tube + Solid stem auger	Monument
MW09	On-base	470345.8	6945352	10.5	50		Monument
MW15	On-base	469469.6	6943937	19	50		Gatic
MW39	On-base	469829.5	6944542	17.5	50		Gatic
MW40	On-base	469329.6	6944915	22	50		Gatic
MW018	On-base	471655	6943518	17	50		Monument

See below figure for replacement groundwater monitoring well

Environmental Clearance Certification



Environmental Clearance Certification



A service locator will identify locations safe to install replacement monitoring groundwater wells. Existing groundwater monitoring wells will be decommissioned by cutting the well to surface and adding cement into the monitoring well. The replacement groundwater monitoring well will be advanced to approximately 1.5 mbgl using a non-destructive drilling technique (hand auger / vacuum extraction) with soil samples collected from each bore at 0.1 and at approximately 0.5 m intervals thereafter to a maximum of 5.0 mbgl. The replacement groundwater monitoring well location will be within 5 m of the existing groundwater monitoring well.

See below for details and location of well head repairs and unblocking groundwater monitoring well.

Well ID	Easting (Zone 56J)	Northing (Zone 56J)	Repair well	Unblock well	Survey	Comment
MW004	471755.00 m E	6941557.00 m S	X			Concrete base repair
MW013	471257.00 m E	6942368.00 m S	X		X	Cover / Standpipe repair
MW014	470029.00 m E	6943456.00 m S	X		X	Standpipe repair
MW016	472507.00 m E	6941524.00 m S		X		Blocked at 13.2m
MW019	471228.00 m E	6942564.00 m S	X		X	Cover / Standpipe repair
MW021	470471.00 m E	6941892.00 m S	X			Cover repair
MW022	471645.00 m E	6941546.00 m S	X		X	Standpipe repair
MW027	470087.00 m E	6942685.00 m S	X		X	Standpipe repair
MW042	468618.00 m E	6943727.00 m S	X			Cover repair
MW047	470829.00 m E	6942034.00 m S	X			Cover repair
MW049	471474.00 m E	6941850.00 m S	X			Raise gatic cover
MW050	471835.00 m E	6941119.00 m S	X			Cover repair
MW217	470326.00 m E	6943633.00 m S	X			Cover repair

Environmental Clearance Certification

See below figure for replacement groundwater monitoring well and blocked well.



The well head repairs will be undertaken using hand tools to replace the gatic or monument cover. The blocked wells will be cleared out using a steel bailer.

Traffic

Contact Base management team to inform/discuss if the work task will create any disruption to unit operations or base traffic flow (along the road shoulder).

Noise

Environmental Clearance Certification



Conduct activities during standard working hours (7.00am to 5.00pm)

Contact Officer's Name	Contact Officer's Phone no.	Contact Officer's email address
[redacted]	[redacted]	[redacted]

Mitigation Measures:

1. All personnel will be briefed on their responsibilities and comply with the mitigation measures (Section A) and all clearance conditions (Section B) of this ECC ensuring not to cause any significant environmental impact on the environment, or any matter of national environmental significance under the EPBC Act.
2. **Existing Utilities**
   Prior to undertaking the investigation, it would be necessary to establish the location of all underground services in the vicinity. A dial Before-You-Dig search will be undertaken and checked along with GFIS/Master Site Plan information to establish the location of underground services. Once on site, service locators (electronic services locator) will be utilised to establish the location of utilities.
3. **Erosion and Sediment Control**
   Disturbed areas to be reinstated and rehabilitated as soon as practical to minimise erosion. No soil is to be moved from one test site to another.
4. **Flora and Fauna**
   RAAF Base Amberley is situated within a Red Imported Fire Ant (RIFA) Restricted Area. All areas where earthworks are being performed or soil is being disturbed must comply with Regulations for RIFA as required by the Queensland Government, QLD, Biosecurity Act 2014. All plant, equipment and machinery entering RAAF Base Amberley will be checked for cleanliness. All plant, equipment and machinery will be checked for cleanliness upon leaving RAAF Base Amberley. All contractors undertaking the above-mentioned works will be notified of the Fire Ant Requirements.
5. **General Waste Items**
   Waste soil and sludge will be stored in drums and removed by the drilling contractor to a licensed landfill at the completion of drilling. No waste is anticipated to be left on Base.
6. **Spill management**
   All vehicles, plant and machinery must be checked for fuel leaks and other spills before commencement of works at each day. Spills will be immediately contained and remediated. Contaminated soil/material will be removed from site and disposed of to a licensed landfill.
7. **Dust**
   Minimise the extent of disturbance areas at any one time. Dust suppression. Working in favourable wind conditions. Cover exposed soil if necessary.
8. **Pest, Weed and Vehicle Hygiene**
   All reasonable steps must be taken to avoid spills and contain spills, with spill kits being readily accessible to users. Any environmental damage caused by vehicle/equipment parking, fuelling, operation, or movement must be remediated by the tractor prior to leaving the site.
   Contractors are to ensure that all stores, vehicles, equipment and vehicle loads are clean and free from contaminants such as soil materials, pests and weeds before they enter the Defence Estate.

Section B – Clearance (*To be completed by Defence Assistant Director Environment & Sustainability / Environment & Sustainability Manager)*

1. The proposal has been assessed and is considered not likely to cause any significant environmental impacts on the environment, or any matters of national environmental significance, under the EPBC Act. The proposal may proceed subject to the following conditions:

Environmental Clearance Certification



Note: This ECC applies to the contaminated soils and geotechnical investigation and assessment works and is not applicable for the construction stage. A subsequent ECC along with a CEMP needs to be developed and provided for approval prior to the commencement of construction works.

General:

1. Personnel are to abide by the above mitigation measures, the RAAF AMB Standing Orders/Instructions and the PFAS OMP – SE Qld Well Maintenance 04 May 2024 Doc No. 60612563_20240509.
2. All personnel are to be made aware of their legislative responsibilities under the Environmental Protection and Biodiversity Conservation Act 1999 and relevant State environmental legislation.
3. No-Go/Restricted areas and relevant detail of the Range Standing Orders will be covered in the range brief provided by Range Control staff, prior to any works commencing on Site.

Pest & Vehicle Hygiene/HAZMAT:

4. Amberley is situated within a Red Imported Fire Ant (RIFA) Restricted Area. All areas where earthworks are being performed or soil is being disturbed (including, but not limited to, excavations, imported fill, mulch, landscaping and transport of plants) must comply with Regulations for RIFA as required by the Queensland Government – QLD Biosecurity Act 2014.
5. All vehicles, plant machinery and equipment must be washed down and inspected for soil, seeds and pest (including but not excluding Red Imported Fire Ant) by the driver/operator prior to every entry to the Defence property.

POL, Vehicle Refuelling and HAZMAT

6. All vehicles must be checked for fuel leaks and other spills before commencement of works each day.

Flora & Fauna Management:

7. No domestic animals are to be brought onto this Defence property.
8. Exceptional care should be taken when driving through the property to avoid accidents with local fauna. If an animal is injured or killed please report the incident to [Base Services, Range Control or] the ESM immediately particularly if the animal is still alive.
9. Due care is to be taken when excavating, drilling, boring or soil sampling to minimise damage to tree roots. Consider hydrovaccing around tree roots as a viable alternative. Damage to any large roots (greater than 80mm diameter) is to be reported to the ESM within four hours. Generally in this situation the contractor will be required to have a minimum AQF Level 3 certified arborist (as per AS4970-2009) to attend the site to correctly prune the root.
10. Open pits and trenches are to be covered when not in use and overnight to exclude all fauna. All pits and trenches are to be checked at least daily for fauna. Where it is not practical to cover the open pit/trench it should be made possible for fauna to exit the excavation by some other means, for example, the use of a plank, shallow excavation etc.

Waste/Contamination:

11. All waste material is to be removed from the area as a result of this work task to an appropriate waste facility. This includes but is not limited to high visibility tape, temporary markers etc.

Defence Environment & Sustainability Manager contact details: [redacted]

2. This Certificate applies only to the proposed action as described in Section A and mitigation measures in Section B.

Environmental Clearance Certification



Signature Environment & Sustainability Manager (ESM) [redacted]	Printed Name [redacted]	Title or Rank [redacted]	Date 31 May 2024
Signature Assistant Director Environment & Sustainability (ADES)	Printed Name	Title or Rank	Date

Environmental Clearance Certification



Section C – Commitment to Comply *(To be signed by the Action Authority or Subcontractor following completion of Section B and before Proposed Action undertaken)*

I have read and I understand the conditions and will ensure full compliance. *(To be signed by the Action Authority)*				
Signature Action Authority	Printed Name	Title or Rank	Appointment	Date

or

I have read and I understand the conditions and will ensure full compliance. *(To be signed by the Subcontractor)*				
Signature Subcontractor	Printed Name	Title or Rank	Appointment	Date
Company				

Environmental Clearance Certification



Section D - Post Activity Report

(To be completed by Action Authority and submitted to the Assistant Director Environment & Sustainability (ADES)/Environment & Sustainability Manager (ESM) within 10 working days following completion of activity and remediation)

1. The proposal requires a post activity report ☒ Yes ☐ No		
Service, Group or Organisation	Unit	File Reference

Mitigation Measures & Conditions (as per Section A & Section B)	Check	Comment
A post activity report will be required at the completion of this activity. Record any environmental incidents (unintentional fire, injury/death of fauna, damage to flora, spills, bogging etc)		

2. This confirms that only the proposed action identified in Section A has been undertaken, and that measures identified in Section A, and conditions in Section B have been implemented according to the claims above. Any lessons learnt or suggestions for an improved environmental outcome identified during this activity have also been recorded.

Signature Action Authority	Printed Name	Title or Rank	Date
Signature Assistant Director Environment & Sustainability (ADES) / Environment & Sustainability Manager (ESM)	Printed Name	Title or Rank	Date

Appendix D

Photograph Log

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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Brymaroo (1435)	Brymaroo Airfield, QLD	11/06/2024	60612563

Plate No.	1

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.234434, 151.619339

Description:
MW001: Grout added around MW001



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Brymaroo (1435)	Brymaroo Airfield, QLD	11/06/2024	60612563

Plate No.	2

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.234434, 151.619339

Description:
MW001: Gatic cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Brymaroo (1435)	Brymaroo Airfield, QLD	11/06/2024	60612563

Plate No.	3

Direction Photo Taken:
SW

CSR ID:
N/A

GPS Co-ordinates:
-27.231979, 151.616562

Description:
MW006: New bolts to gatic cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Damascus Barracks	Pinkenba, QLD	12/06/2024	60612563

Plate No.	4

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.423092, 153.101242

Description:
MW002: Not found- destroyed



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Damascus Barracks	Pinkenba, QLD	18/06/2024	60612563

Plate No.	5

Direction Photo Taken:
SW

CSR ID:
N/A

GPS Co-ordinates:
-27.426632, 153.098648

Description:
MW004: Repaired monument



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No.	6

Direction Photo Taken:
SW

CSR ID:
N/A

GPS Co-ordinates:
-27.425806, 152.974854

Description:
MW407 former MW026: New J cap



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No. 7

Direction Photo Taken:
SW

CSR ID:
N/A

GPS Co-ordinates:
-27.425756, 152.974854

Description:
MW407 former MW026: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No. 8

Direction Photo Taken:
SW

CSR ID:
N/A

GPS Co-ordinates:
-27.425976, 152.975540

Description:
MW408 former MW027: New J cap



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No. 9

Direction Photo Taken:
N/A

CSR ID:
N/A

GPS Co-ordinates:
-27.425976, 152.975540

Description:
MW408 former MW027: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No. 10

Direction Photo Taken:
N/A

CSR ID:
N/A

GPS Co-ordinates:
-27.432865, 152.975525

Description:
MW010: New J cap and seal



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No.	11

Direction Photo Taken:
N/A

CSR ID:
N/A

GPS Co-ordinates:
-27.434923, 152.980606

Description:
MW001: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Gallipoli Barracks	Enoggera, QLD	12/06/2024	60612563

Plate No.	12

Direction Photo Taken:
N/A

CSR ID:
N/A

GPS Co-ordinates:
-27.434713, 152.980927

Description:
MW006: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Kokoda Barracks	Witheren, QLD	13/06/2024	60612563

Plate No.	13

Direction Photo Taken:
N/A

CSR ID:
N/A

GPS Co-ordinates:
-28.027042, 153.185791

Description:
MW001: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No.	14

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.649767, 152.713684

Description:
MW004: Old standpipe



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No.	15

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.649767, 152.713684

Description:
MW004: New standpipe



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No.	16

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.649767, 152.713684

Description:
MW004: New standpipe



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No. 17

Direction Photo Taken:
N/A

CSR ID:
N/A

GPS Co-ordinates:
-27.642448, 152.708633

Description:
MW013: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	04/06/2024	60612563

Plate No. 18

Direction Photo Taken:
W

CSR ID:
N/A

GPS Co-ordinates:
-27.632601, 152.696182

Description:
MW014: Repaired monument cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No. 19

Direction Photo Taken:

CSR ID:
N/A

GPS Co-ordinates:
-27.650106, 152.721298

Description:
MW016: Old monument cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No. 20

Direction Photo Taken:

CSR ID:
N/A

GPS Co-ordinates:
-27.650106, 152.721298

Description:
MW016: New monument cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	21
Direction Photo Taken:	
CSR ID: N/A	
GPS Co-ordinates: -27.650106, 152.721298	
Description: MW016: Blockage - rootlets	



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	08/06/2024	60612563

Plate No.	22
Direction Photo Taken:	
CSR ID: N/A	
GPS Co-ordinates: -27.640772, 152.708405	
Description: MW019: New J cap and grout added	



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	08/06/2024	60612563

Plate No.	23
Direction Photo Taken:	
CSR ID: N/A	
GPS Co-ordinates: -27.640772, 152.708405	
Description: MW019: Well cover	



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	08/06/2024	60612563

Plate No.	24
Direction Photo Taken:	
CSR ID: N/A	
GPS Co-ordinates: -27.646706, 152.700668	
Description: MW021: Well cover	



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	25

Direction Photo Taken:

CSR ID:
N/A

GPS Co-ordinates:
-27.649887, 152.712540

Description:
MW022: Old monument cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	26

Direction Photo Taken:

CSR ID:
N/A

GPS Co-ordinates:
-27.649887, 152.712540

Description:
MW022: New monument cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	06/06/2024	60612563

Plate No. 27

Direction Photo Taken:

CSR ID:
N/A

GPS Co-ordinates:
-27.639593, 152.696793

Description:
MW027: Monument cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	06/06/2024	60612563

Plate No. 28

Direction Photo Taken:

CSR ID:
N/A

GPS Co-ordinates:
-27.639593, 152.696793

Description:
MW027: New J cap



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	29

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.630125, 152.681915

Description:
MW042: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	13/06/2024	60612563

Plate No.	30

Direction Photo Taken:
SE

CSR ID:
N/A

GPS Co-ordinates:
-27.628292, 152.698105

Description:
MW046: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No.	31

Direction Photo Taken:
SE

CSR ID:
N/A

GPS Co-ordinates:
-27.645441, 152.704300

Description:
MW047: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	32

Direction Photo Taken:
W

CSR ID:
N/A

GPS Co-ordinates:
-27.647129, 152.710831

Description:
MW049: Well cover and concrete plinth



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	33

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.647129, 152.710831

Description:
MW049: Well cover and concrete plinth



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	03/06/2024	60612563

Plate No.	34

Direction Photo Taken:
SE

CSR ID:
N/A

GPS Co-ordinates:
-27.653751, 152.714523

Description:
MW050: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	03/06/2024	60612563

Plate No.	35

Direction Photo Taken:
SE

CSR ID:
N/A

GPS Co-ordinates:
-27.631193, 152.699249

Description:
MW217: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	06/06/2024	60612563

Plate No.	36

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.615020, 152.705230

Description:
MW008: Decommissioned well



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	17/06/2024	60612563

Plate No.	37

Direction Photo Taken:
SE

CSR ID:
N/A

GPS Co-ordinates:
-27.615021, -27.615021

Description:
MW535: MW008 replacement well



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No.	38

Direction Photo Taken:
NW

CSR ID:
N/A

GPS Co-ordinates:
-27.615509, 152.699463

Description:
MW009: Decommissioned well



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	07/06/2024	60612563

Plate No. 39

Direction Photo Taken:
W

CSR ID:
N/A

GPS Co-ordinates:
-27.615496, 152.699478

Description:
MW536: MW535 monument cover with decommissioned MW009 inlong grass



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	17/06/2024	60612563

Plate No. 40

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.628384, 152.691193

Description:
MW537 well cover - replacement for MW015



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No. 41

Direction Photo Taken:
NE

CSR ID:
N/A

GPS Co-ordinates:
-27.632098, 152.712685

Description:
MW018: Decommissioned well



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	05/06/2024	60612563

Plate No. 42

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.632116, 152.712753

Description:
MW538 well cover - replacement for MW018



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
RAAF Base Amberley (0861)	Amberley, QLD	17/06/2024	60612563

Plate No.	43

Direction Photo Taken:
NW

CSR ID:
N/A

GPS Co-ordinates:
-27.622820, 152.694092

Description:
MW539 well cover - replacement for MW039



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	44

Direction Photo Taken:
NE

CSR ID:
N/A

GPS Co-ordinates:
-27.414240, 151.725269

Description:
MW167: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	45

Direction Photo Taken:
NE

CSR ID:
N/A

GPS Co-ordinates:
-27.411423, 151.724670

Description:
MW171: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	46

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.419445, 151.729584

Description:
MW178: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No.	47

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.419977, 151.724809

Description:
MW180: Blockage - rootlets



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No.	48

Direction Photo Taken:
S

CSR ID:
N/A

GPS Co-ordinates:
-27.419977, 151.724809

Description:
MW180: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No.	49
Direction Photo Taken:	W
CSR ID:	N/A
GPS Co-ordinates:	-27.414774, 151.734161
Description:	MW202: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No.	50
Direction Photo Taken:	W
CSR ID:	N/A
GPS Co-ordinates:	-27.415919, 151.738086
Description:	MW230: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No. 51

Direction Photo Taken:
SW

CSR ID:
N/A

GPS Co-ordinates:
-27.399691, 151.752450

Description:
MW265: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No. 52

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.399691, 151.752450

Description:
MW265: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No. 53

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.419933, 151.716995

Description:
MW266: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No. 54

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.424519, 151.736069

Description:
MW270: Blockage - rootlets



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	55

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.424519, 151.736069

Description:
MW270: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	56

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.418533, 151.701317

Description:
MW272: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No. 57

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.439590, 151.711815

Description:
MW282: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No. 58

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.439590, 151.711815

Description:
MW282: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	59
Direction Photo Taken:	N
CSR ID:	N/A
GPS Co-ordinates:	-27.439985, 151.721237
Description:	MW291: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	60
Direction Photo Taken:	E
CSR ID:	N/A
GPS Co-ordinates:	-27.439985, 151.721237
Description:	MW291: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	61

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.430906, 151.723618

Description:
MW292: Well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	62

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.428560, 151.731812

Description:
MW294: Old well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	63

Direction Photo Taken:
E

CSR ID:
N/A

GPS Co-ordinates:
-27.428560, 151.731812

Description:
MW294: New well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	10/06/2024	60612563

Plate No.	64

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.428560, 151.731812

Description:
MW294: New well cover



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PHOTOGRAPHIC LOG

Site Name:	Site Location:	Date of Photograph:	Project No:
Swartz Barracks (0207)	Oakey, QLD	11/06/2024	60612563

Plate No.	65

Direction Photo Taken:
N

CSR ID:
N/A

GPS Co-ordinates:
-27.413780, 151.728268

Description:
MW300: Well cover



Appendix E

Bore Logs

AECOM

Final

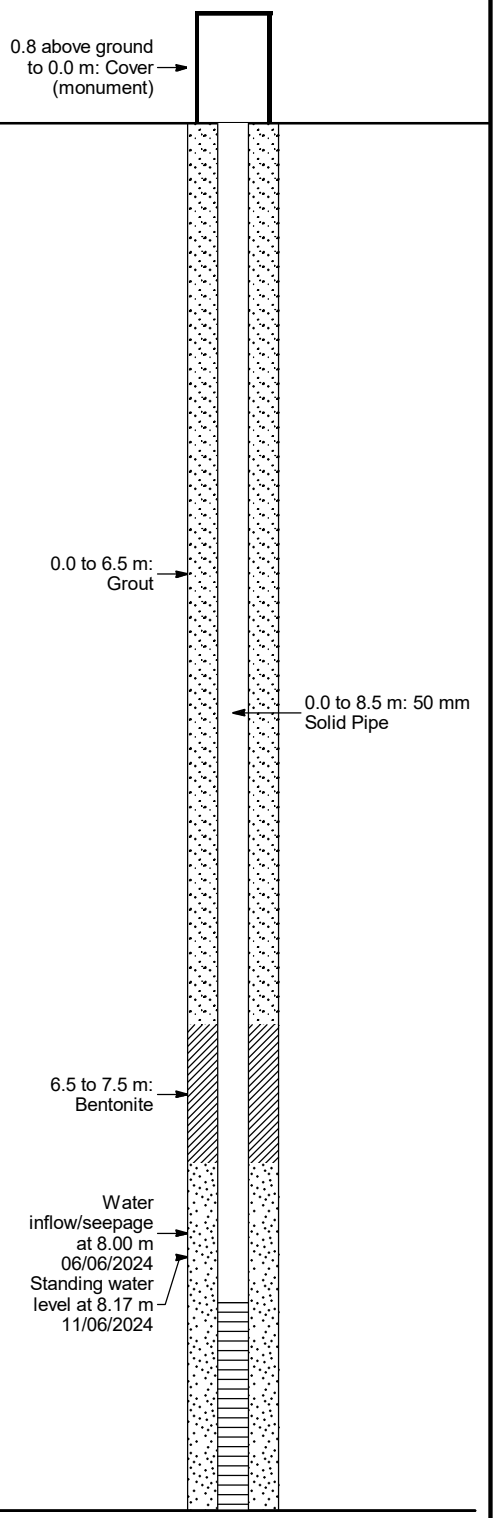
MONITORING WELL MW535/BH535

Sheet: 1 of 3

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	06/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	06/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	25.266m
Driller:	Proactive Drilling Services	**Easting:**	470917.47 m	**Top of Cas. RL:**	25.331m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6945406.01 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	13.50 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval	PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)
HA			0861_BH535_0.2_240606		CI	Silty CLAY: Medium plasticity, dark brown. with some fine sand, fine rootlets, moist, soft.	M	0
			0861_BH535_0.5_240606			at 0.30 m: dark grey		
					CL	CLAY: Low plasticity, yellow-brown, moist, firm-stiff.		
			0861_BH535_1.0_240606			at 1.20 m: dark grey-brown		1
PT			0861_BH535_2.0_240606			at 2.20 m: black inclusions, orange mottles		2
			0861_BH535_3.0_240606			at 3.00 m: brown		3
			0861_BH535_4.0_240606			at 3.80 m: soft-firm		4
AD			0861_BH535_5.0_240606			at 4.80 m: very stiff		5
			0861_BH535_6.0_240606					6
			0861_BH535_7.0_240606					7
			0861_BH535_8.0_240606		CI	Sandy CLAY: Medium plasticity, fine sand, brown, moist, soft.	W	8
			0861_BH535_9.0_240606					9

WELL CONSTRUCTION DETAILS



AECOM

Final

MONITORING WELL MW535/BH535

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	06/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	06/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	25.266m
Driller:	Proactive Drilling Services	**Easting:**	470917.47 m	**Top of Cas. RL:**	25.331m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6945406.01 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	13.50 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)	WELL CONSTRUCTION DETAILS
AD		0861_BH535_10.0 _240606		CI	Sandy CLAY: Medium plasticity, fine sand, brown, moist, soft.	W	10	7.5 to 13.5 m: Sand
		0861_BH535_11.0 _240606					11	8.5 to 13.5 m: 50 mm Slotted Pipe
		0861_BH535_12.0 _240606					12	
		0861_BH535_13.0 _240606					13	
					MW535/BH535 terminated at 13.50 m. Target depth		14	
							15	
							16	
							17	
							18	
							19	

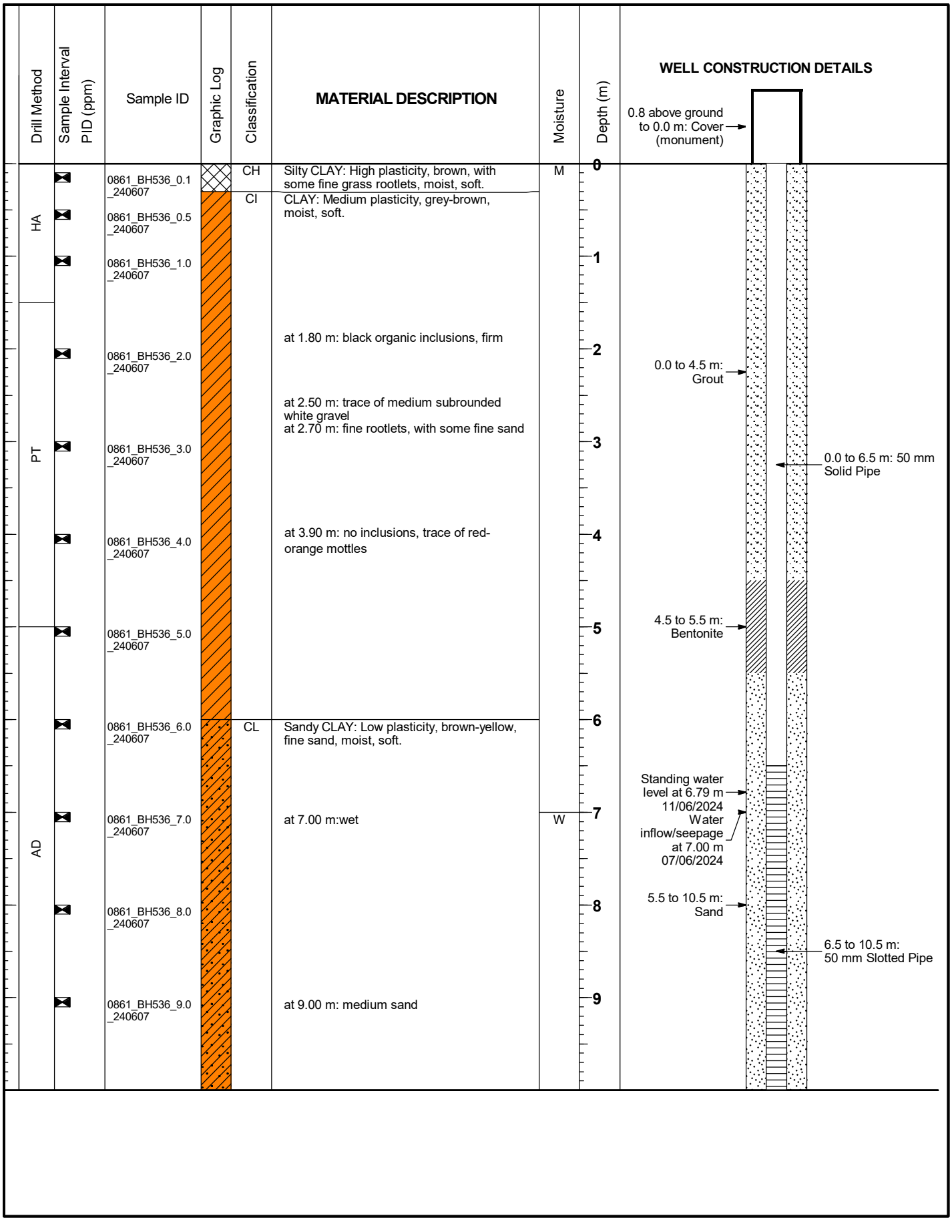
AECOM

Final

MONITORING WELL MW536/BH536

Sheet: 1 of 3

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	07/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	07/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	25.08 m
Driller:	Proactive Drilling Services	**Easting:**	470347.73 m	**Top of Cas. RL:**	25.17 m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6945355.30 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	10.50 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	



2018_ANZ_ENV_01. WELL RAAF AMBERLEY.GPJ AECOM_5-00.GDT AECOM_5-00AA.GLB 9.7.2024

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Final

MONITORING WELL MW536/BH536

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	07/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	07/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	25.08 m
Driller:	Proactive Drilling Services	**Easting:**	470347.73 m	**Top of Cas. RL:**	25.17 m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6945355.30 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	10.50 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)	WELL CONSTRUCTION DETAILS
AD		0861_BH536_10.0_240607		CL	Sandy CLAY: Low plasticity, brown-yellow, fine sand, moist, soft.	W	10	
					MW536/BH536 terminated at 10.50 m. Target depth		11	
							12	
							13	
							14	
							15	
							16	
							17	
							18	
							19	

AECOM

Final

MONITORING WELL MW537/BH537

Sheet: 1 of 3

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	04/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	04/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	34.758 m
Driller:	Proactive Drilling Services	**Easting:**	469532.60 m	**Top of Cas. RL:**	34.781 m
Drill Type:	hand auger, push tube, rotary with blade, auger drilling	**Northing:**	6943921.23 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	19.00 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Fill
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval	PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)
HA			0861_BH537_0.1_240604		SP	Gravelly SAND: Poorly graded, coarse angular sand, grey, medium subrounded gravel, moist, loose.	M	0
			0861_BH537_0.5_240604					
			0861_BH537_1.0_240604		CL	Sandy CLAY: Low plasticity, brown, coarse angular sand, with some fine gravels, moist, soft.		1
					SP	Gravelly SAND: Poorly graded, coarse angular sand, grey, medium subrounded gravel, moist, loose.		
PT					CH	CLAY: High plasticity, grey-brown, trace of medium gravel, moist, firm.		
			0861_BH537_2.0_240604			at 2.00 m: no medium gravel present		2
			0861_BH537_3.0_240604			at 3.00 m: red-grey, with some orange mottles		3
			0861_BH537_4.0_240604					4
			0861_BH537_5.0_240604					5
						at 5.80 m: soft to firm		
			0861_BH537_6.0_240604					6
RB			0861_BH537_7.0_240604			at 7.00 m: brown		7
			0861_BH537_8.0_240604					8
AD			0861_BH537_9.0_240604			at 9.00 m: yellow-brown, soft, wet	W	9

WELL CONSTRUCTION DETAILS

0.1 above ground to 0.0 m: Cover (flush)

0.0 to 13.5 m: Grout

0.0 to 15.0 m: 50 mm Solid Pipe

Water inflow/seepage at 9.00 m 04/06/2024

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Final

MONITORING WELL MW537/BH537

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	04/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	04/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	34.758 m
Driller:	Proactive Drilling Services	**Easting:**	469532.60 m	**Top of Cas. RL:**	34.781 m
Drill Type:	hand auger, push tube, rotary with blade, auger drilling	**Northing:**	6943921.23 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	19.00 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Fill
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)	WELL CONSTRUCTION DETAILS
AD		0861_BH537_10.0_240604		CH	CLAY: High plasticity, grey-brown, trace of medium gravel, moist, firm. at 10.00 m: grey	W	10	
		0861_BH537_11.0_240604					11	
		0861_BH537_12.0_240604					12	
		0861_BH537_13.0_240604					13	
		0861_BH537_14.0_240604			at 14.00 m: brown		14	13.5 to 14.5 m: Bentonite
		0861_BH537_15.0_240604					15	Standing water level at 15.18 m 13/06/2024
		0861_BH537_16.0_240604					16	
		0861_BH537_17.0_240604					17	14.5 to 19.0 m: Sand 15.0 to 19.0 m: 50 mm Slotted Pipe
		0861_BH537_18.0_240604					18	
		0861_BH537_19.0_240604			*MW537/BH537 terminated at 19.00 m.* *Target depth*		19	

AECOM

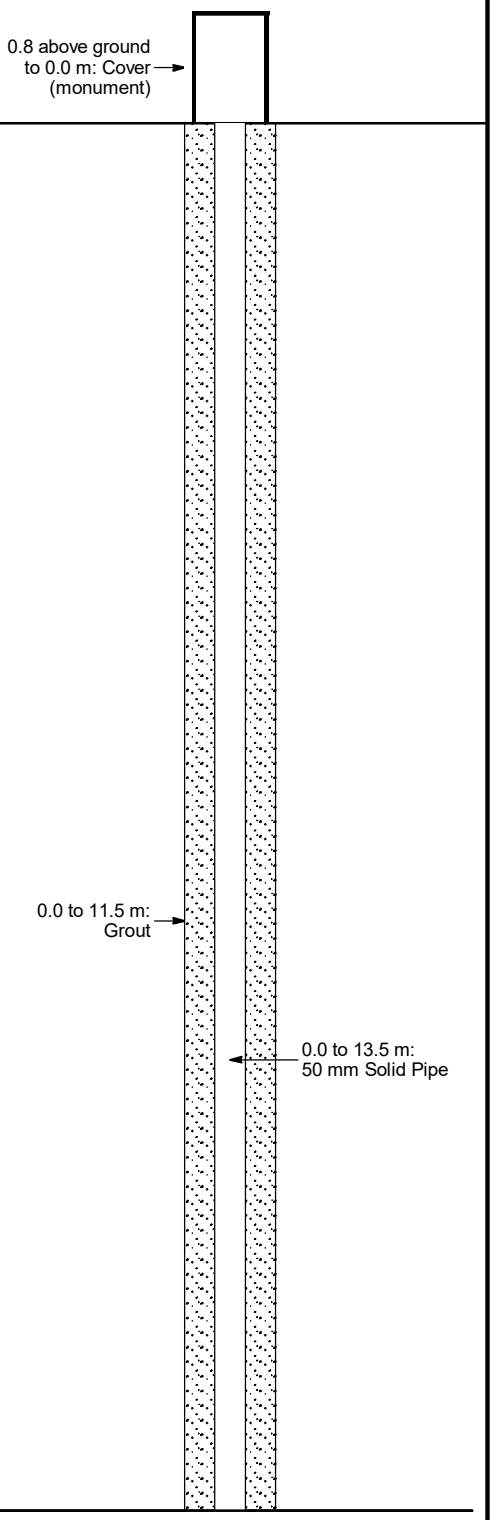
Final

MONITORING WELL MW538/BH538

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	05/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	05/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	24.395 m
Driller:	Proactive Drilling Services	**Easting:**	471661.94 m	**Top of Cas. RL:**	25.218 m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6943518.00 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	17.00 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval	PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)
HA			QC100/QC200		CH	Silty CLAY: High plasticity, brown, with some fine rootlets, trace of fine sand, moist, soft.		0
			0861_BH538_0.2 _240605		CH	CLAY: High plasticity, grey with brown mottles, with some fine rootlets, moist, firm.		
			0861_BH538_0.5 _240605					
			0861_BH538_1.0 _240605					1
PT			0861_BH538_2.0 _240605			at 2.50 m: red mottles		2
			0861_BH538_3.0 _240605			at 3.70 m:grey with trace lenses of green clay		3
			0861_BH538_4.0 _240605			at 4.10 m: fine black (organic?) inclusions		4
			0861_BH538_5.0 _240605			at 5.30 m: with some brown mottles, soft		5
			0861_BH538_6.0 _240605					6
AD			0861_BH538_7.0 _240605			at 7.00 m: brown		7
			0861_BH538_8.0 _240605					8
			0861_BH538_9.0 _240605			at 9.00 m: trace of fine white subrounded gravel		9

WELL CONSTRUCTION DETAILS



AECOM

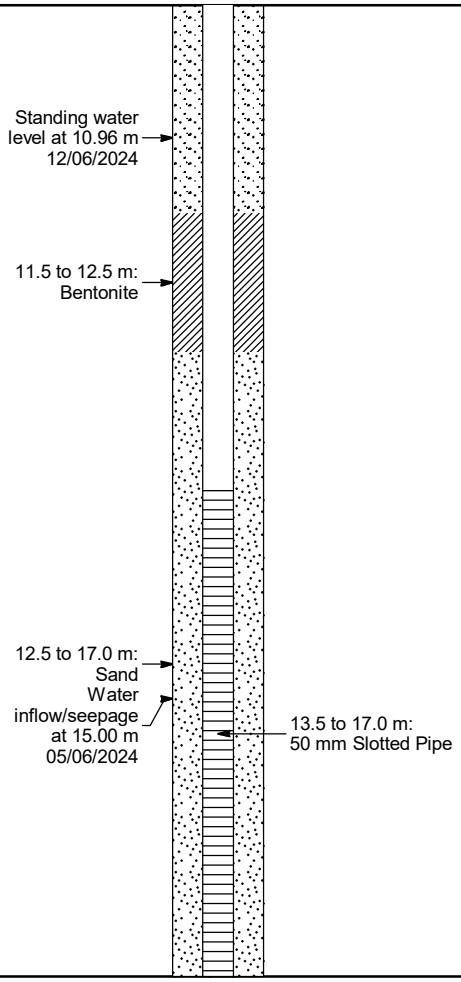
Final

MONITORING WELL MW538/BH538

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	05/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	05/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	24.395 m
Driller:	Proactive Drilling Services	**Easting:**	471661.94 m	**Top of Cas. RL:**	25.218 m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6943518.00 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	17.00 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)
AD		0861_BH538_10.0 _240605		CH	CLAY: High plasticity, grey with brown mottles, with some fine rootlets, moist, firm.		10
		0861_BH538_11.0 _240605					11
		0861_BH538_12.0 _240605					12
		0861_BH538_13.0 _240605			at 13.00 m: soft to very soft		13
		0861_BH538_14.0 _240605		CL	Sandy CLAY: Low plasticity, brown, fine sand, moist, soft.		14
		0861_BH538_15.0 _240605			at 15.00 m: wet, very soft, medium to coarse sand		15
		0861_BH538_16.0 _240605					16
		0861_BH538_17.0 _240605			*MW538/BH538 terminated at 17.00 m. Target depth*		17
							18
							19

WELL CONSTRUCTION DETAILS



AECOM

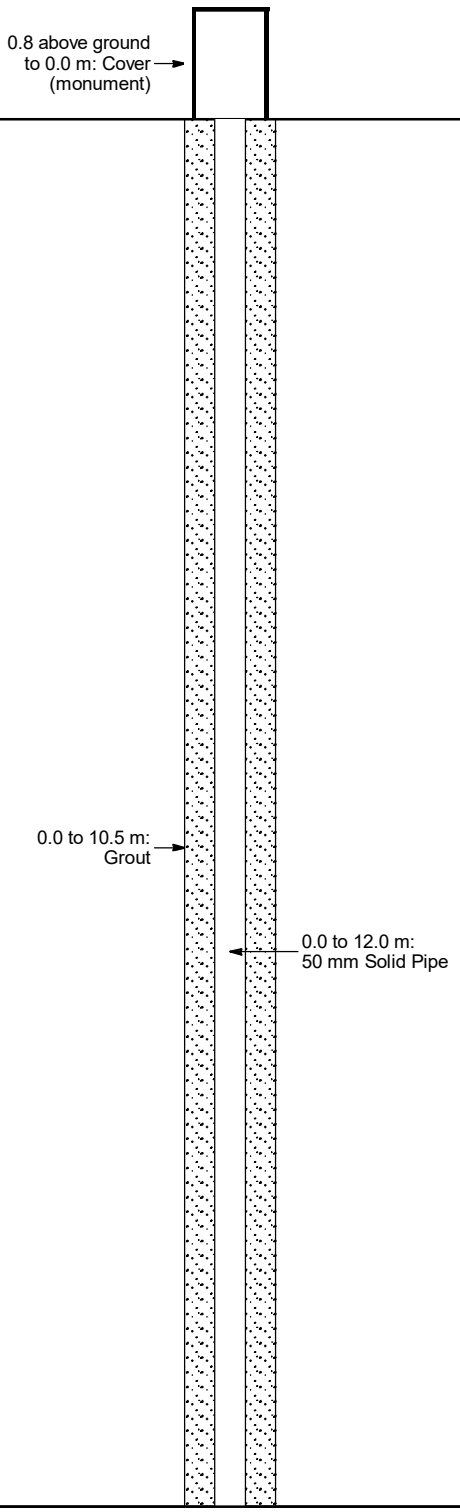
Final

MONITORING WELL MW539/BH539

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	03/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	03/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	29.431m
Driller:	Proactive Drilling Services	**Easting:**	469819.56 m	**Top of Cas. RL:**	30.288 m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6944542.79 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	15.00 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval	PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)
HA			0861_BH539_0.2_240603		CL	CLAY: Low plasticity, grey, with some medium sand, with some fine rootlets, moist, soft.	M	0
			0861_BH539_0.5_240603		CH	CLAY: High plasticity, brown, with some medium sand, moist, firm. at 0.70 m:yellow-brown-grey		
			0861_BH539_1.0_240603					1
PT						at 1.40 m: trace of white coarse sand, trace of rounded fine gravel		
			0861_BH539_2.0_240603					2
						at 2.60 m: grey-brown, no gravel or sand present		
			0861_BH539_3.0_240603					3
			0861_BH539_4.0_240603					4
			0861_BH539_5.0_240603					5
			0861_BH539_6.0_240603					6
AD			0861_BH539_7.0_240603					7
			0861_BH539_8.0_240603			at 8.00 m: grey, very firm		8
			0861_BH539_9.0_240603					9

WELL CONSTRUCTION DETAILS



AECOM

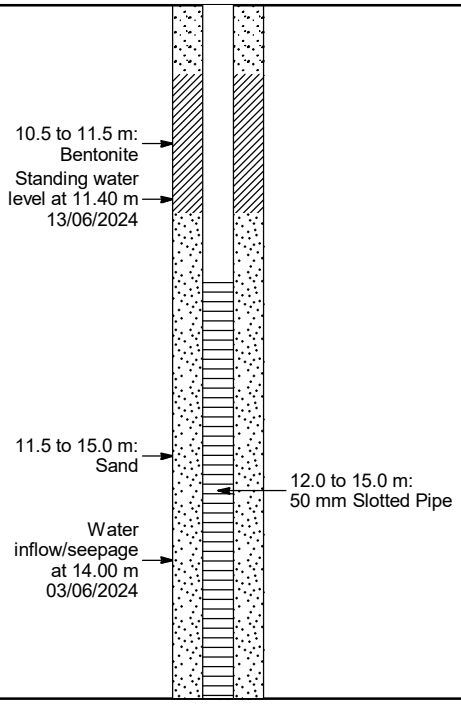
Final

MONITORING WELL MW539/BH539

Client:	Department of Defence	**Project No:**	60612563	**Start Date:**	03/06/2024
Project:	RAAF Base Amberley	**Logged by:**	NK	**End Date:**	03/06/2024
Location:	RAAF Base Amberley	**Checked by:**	JP	**Surface RL:**	29.431 m
Driller:	Proactive Drilling Services	**Easting:**	469819.56 m	**Top of Cas. RL:**	30.288 m
Drill Type:	hand auger, push tube, auger drilling	**Northing:**	6944542.79 m	**Ver. Datum:**	AHD
Drill Model:	Geoprobe 7822 DT	**Total Depth:**	15.00 m	**Hor. Proj/Dat:**	MGA94/GDA94-56J	**Surface:**	Grass
Drill Fluid:	-	**Bore Dia.:**	150 mm	**Pipe Dia.:**	50 mm	**Permit No.:**	

Drill Method	Sample Interval PID (ppm)	Sample ID	Graphic Log	Classification	MATERIAL DESCRIPTION	Moisture	Depth (m)
AD		0861_BH539_10.0_240603		CH	CLAY: High plasticity, brown, with some medium sand, moist, firm.	M	10
		0861_BH539_11.0_240603					11
		0861_BH539_12.0_240603					12
		0861_BH539_13.0_240603					13
		0861_BH539_14.0_240603			at 14.00 m: very soft, wet, with some coarse sand	W	14
		0861_BH539_15.0_240603			*MW539/BH539 terminated at 15.00 m. Collapse*		15
		0861_BH539_16.0_240603					16
		0861_BH539_17.0_240603					17
							18
							19

WELL CONSTRUCTION DETAILS



Remarks: 14.00-15.00 mHole continues to collapse. Unable to install MW539 to target depth of 17.5 mbgl.

Appendix F

Well Development Logs

ANZ

FQM - Groundwater Sampling and Purging Record

Develop.

(amend 5)

Project Name:	GMP Well Maintenance	Project Number:	60677951	Bore ID:	MW537
Client:	DoD	Project Location:	Amb	Sample Date:	13/6/24
FM Name:	[redacted]	Relevant Staff:		Well Development or Well Sampling Event? (circle)	

General Bore Information				Parameter Info.	Decontamination	Sampling Method		Hydrasleeve Info.	
Date of Gauging:	13/6/24	Bore Radius (mm):	140	Chem Kit Serial No.:	FI Decontaminated	FI Low Flow Pump (etc.		Hydrasleeve Size:	Monitoring sequence followed (number in order):
Depth to GW (m-pvc):	15.2	Screen Interval (m):	15 – 19	Chem Kit Model:	FI Duplicate	Intake depth:		Hydrasleeve Type:	
Bore Depth (m-pvc):	19.2	Casing Radius (mm):	50	Corrected Redox: Y / N	FI Disposable	FI Bailer	FI Hydrasleeve	Sampling Depth (m-pvc):	Gauging:
Depth to Product (m-pvc):	–	Cover Type (gatic / flush):		(This correction to apply to probe dependent)	FI Other (specify):	FI Peristaltic Pump	FI Waterra	Hydrasleeve Install time:	Hydrasleeve in:
Product Thickness (m):	–	Bore Locked (YES / NO):		Parameter method: FI Downhole		FI Other (specify):		Sampling Start Time:	Hydrasleeve out:
		Key Type (if applicable):	–	FI Removed					Parameters:
Calculated bore volume (L)		Includes/ excludes bore annulus (circle)		# purge volumes removed:		Total purged volume (L):			

Water Quality Parameters

Time	Cumulative Vol. Removed (L)	SWL (m-pvc)	Pump Rate	DO (ppm or mg/L)	E.C. (mS/cm or µS/cm)	pH	Redox (mV)	Temp °C	Odour, Colour, Turbidity
1315	10	–	–	7.20	26998	7.92	170.6	23.0	low turb, brown
1340	20	–	–	5.79	29818	8.02	169.2	19.0	"
	– Dry @		2.2 L.						
Acceptable Parameter Range:				± 10%	± 3%	± 0.05	± 10 mV	± 0.2 °C	± 10% turbidity (if using a turbidity meter)

Analytes Sampled for:		Bottles Collected						QA/QC Information	Field Comments
Field Filtered:	Unfiltered:	x 40 mL Vial (HCl)		x 60 mL Perox.		x 60 mL Hydrid (HNO3)			Bore volume calculation, bore condition, rate of turbidity decline, correction etc.
		x 30 mL Vial (H2SO4)		x 125 mL Amber		x 250 mL Bottle			19.2 – 15.2 = 4m × 2 × 3
									= 24 L = 3 well volumes.

Approved and Distribution

[redacted]

[redacted]

AECOM

AN7

FQM - Groundwater Sampling and Purging Record

QAAN(EV)-405-FM1

(AMW39)

Project Name:	DMP Well Maintenance	Project Number:	60681260	PM Name:	[redacted]
Client:	DoD	Project Location:		Fieldwork Staff:	

Bore ID: AMW39

Sample Date: 13/6/24

Well Development or Well Sampling Event? (circle)

General Bore Information		Parameter Info.	Decontamination	Sampling Method	Hydrasleeve Info.	
Date of GW Level: 13/6/24	Bore Radius (mm): 200	Chem Kit Serial No:	FI Decontaminated	FI Low Flow Pump rate:	Hydrasleeve Size	Monitoring sequence followed (number in order):
Depth to GW (m-pvc): 14.44	Screen Interval (m): 12 - 15	Chem Kit Model:	FI Dedicated	Intake depth:	Hydrasleeve Type:	
Bore Depth (m-pvc): 14.4	Casing Radius (mm): 50	Corrected Redox: Y / N	FI Disposable	FI Bailer FI Hydrasleeve	Sampling Depth (m-pvc):	Grundfo
Depth to Product (m pvc): –	Cover Type (gatic/stick up)	(The correction is apply to probe operation)	FI Other (specify)	FI Peristaltic Pump FI Waterra	Hydrasleeve Install time:	Hydrasleeve in
Product Thickness (m): –	Bore Locked (YES/NO):	Parameter method: FI Downhole		FI Other (specify)	Sampling Start Time	Hydrasleeve out:
	Key Type (if applicable): –	FI Retrieved				Parameters
Calculated bore volume (L):	Includes/ excludes bore annulus (circle)	# purge volumes removed		Total purged volume (L):		

Water Quality Parameters

Time	Cumulative Vol. Removed (L)	SWL (m-pvc)	Pump Rate	DO (ppm or mg/L)	E.C. (mS/cm or uS/cm)	pH	Redox (mV)	Temp °C	Odour, Colour, Turbidity
12:10	10	–	–	7.12	3514	7.20	162.1	21.0	High Turb - brown, medium sand
12:17	20	–	–	~~7.3~~ 6.82	3654	7.47	173.9	19.7	"
12:29	30	–							
12:29	30	–	–	7.50	3700	7.99	171.3	19.6	"
12:34	40	–	–	7.41	3665	8.21	172.2	19.4	" - fine sand.
									(3 well volume - 3 x 2 x 3 = 18L)
Acceptable Parameter Range:				± 10%	± 3%	± 0.05	± 10 mV	± 0.2 °C	± 10% turbidity (if using a turbidity meter)

Analytes Sampled for:		Bottles Collected			QA/QC Information	Field Comments
Field Filtered:	Un-Filtered:	x 40 mL Vial (HCl)	x 60 mL Plastic	x 50 mL metals (HNO3)		Note volume calculation, bore condition, rate of tubing, redox correction etc.
	✓	x 40 mL Vial (H2SO4)	x 100 mL Amber	x 250 mL Plastic		Resampled TD measured low 1m (1m of sediment removed) 14.4m to 15.6m TD

Approved and Reviewed by:

[redacted]

[redacted]

AECOM

ANZ

FQM - Groundwater Sampling and Purging Record

Q4AN(EV)-403-FM1

(mw5-18)

Project Name:	CMP Well Maintenance	Project Number	60612552	Bore ID:	mw53s
Client:	DoD	Project Location:		Sample Date:	11/4/24
				Field crew SAM	Well Development or Well Sampling Event? (circle)

General Bore Information		Parameter Info.	Decontamination	Sampling Method	Hydrasleeve Info.
Date of GW Level: 11/4/24	Bore Radius (mm): 260	Chem Kit Serial No.:	☐ Decontaminated	☐ Low Flow Pump Info: Intake depth:	Hydrasleeve Size:
Depth to GW (m-pvc): 11.94	Screen Interval (m): 15.5 – 17	Chem Kit Model:	☐ Dedicated		Hydrasleeve Type:
Bore Depth (m-pvc): 17.61 (BD)	Casing Radius (mm): 50 50	Corrected Redox: Y / N	☐ Disposable	☐ Bailer ☐ Hydrasleeve	Sampling Depth (m-pvc):
Depth to Product (m-pvc): –	Cover Type (padlock etc):	(The correction to apply is probe dependent)	☐ Other (specify)	☐ Peristaltic Pump ☐ Waterra	Hydrasleeve Install Time:
Product Thickness (m): –	Bore Locked (YES/NO):	Parameter method: ☐ Downhole		☐ Other (specify)	Sampling Start Time:
	Key Type (if applicable): –	☐ Retrieved			

Monitoring Sequence followed (number in order):
Gauging
Hydrasleeve in
Hydrasleeve out
Parameters

Calculated bore volume (L):	Includes/ excludes bore annulus (circle)	* purge volumes removed.	Total purged volume (L):

Water Quality Parameters

Time	Cumulative Vol. Removed (L)	SWL (m-pvc)	Pump Rate	DO (ppm or mg/L)	E.C. (mS/cm or µS/cm)	pH	Redox (mV)	Temp °C	Odour, Colour, Turbidity
1540	10	–	–	3.01	11.98	6.55	202.1	19.3	High Turb, brown, clay.
	= Dry								
Acceptable Parameter Range:				± 10%	± 3%	± 0.05	± 10 mV	± 0.2 °C	± 10% turbidity (if using a turbidity meter)

Analytes Sampled for:		Bottles Collected				QA/QC Information	Field Comments
Field Filtered:	Lab Filtered:	x 40 ml Vial (HCl)		x 60 mL Falcon	x 50 mL bottle (HNO3)		Bore volume calculation, bore condition, head of tubing, recce correction etc.
	–	x 40 mL Vial (H2SO4)		x 100 mL Amber	x 250 mL Plastic		

Approval and Distribution

[redacted]

[redacted]

AHZ

Developing

FQM - Groundwater Sampling and Purging Record

AECOM

QEAN[EV]-###-FM1

Project Name:	DMP Well Maintenance	Project Number:	60612563	PM Name:	[redacted]
Client:	DoD	Project Location:	Ryan B.	Field Sample Sgnt:	

Bore ID:	MW536
Sample Date:	11/6/24
Well Development or Well Sampling Event? (circle)	

General Bore Information				Parameter Info.	Decontamination	Sampling Method		Hydrasleeve Info.	
Date of GW Level:	11/6/24	Bore Radius (mm):	200	Chem Kit Serial No.:	F1 Decontaminated	F1 Low Flow Pump		Hydrasleeve Size:	Monitoring sequence followed (if water in order):
Depth to GW (m-pvc):	7.61 m below	Screen Interval (m):	6.5 - 10.5	Chem Kit Model:	F2 Dedicated	Intake depth:		Hydrasleeve Type:	
Bore Depth (m-pvc):	11.33 m below	Casing Radius (mm):	50	Corrected Redox: Y / N	F3 Disposable	F1 Bailer	F1 Hydrasleeve	Sampling Depth (m-pvc)	Gauging
Depth to Product (m-pvc):		Cover Type (grate/bollard):		(The correction may apply a probe dependent)	F4 Other (specify)	F2 Peristaltic Pump	F2 Waterra	Hydrasleeve installation time	Hydrasleeve in
Product Thickness (m):		Bore Locked (YES/NO):		Parameter method: F1 Downhole		F3 Other (specify)		Sampling Start Time:	Hydrasleeve out
		Key Type (if applicable):	—	F2 Retrieved					Parameters

Calculated bore volume (L): Includes / excludes bore annulus (circle) # purge volumes removed: Total purged volume (L):

Water Quality Parameters

Time	Cumulative Vol. Removed (L)	SWL (m-pvc)	Pump Rate	DO (ppm or mg/L)	EC (µS/cm or µS/cm)	pH	Redox (mV)	Temp °C	Odour, Colour, Turbidity
15:52	—	7.69	—	—	—	—	—	—	
15:57	~10	—	—	6.26	2747	7.44	131.6	21.1	Dark Brown - High Turb.
16:03	20	—	—	6.62	2579	8.36	117.4	19.5	"
16:16	30	—	—	7.25	2489	8.51	108.5	18.7	" High - Med. Turb.
	25								
16:25	—	8.15	—	—	—	—	—	—	3 well volumes = 22.32L.
									removed 2.5L.
Acceptable Parameter Range:				± 10%	± 3%	± 0.05	± 10 mV	± 0.2 °C	± 10% turbidity (if using a turbidity meter)

Analytes Sampled for:		Bottles Collected				QA/QC Information	Field Comments
Field Filtered:	Unfiltered:	x dC ml Vial (HCl)		x 60 ml Forrous	x 40 ml Vials (HNO3)		Bore volume calculation, bore condition, tubing, redox correction etc
✓	✓	x 40 mL Vial (H2SO4)		x 125 ml Amber	x 250 ml Plastic		

Approval and Distribution

[redacted]

[redacted]

AECOM

ANZ

FQM - Groundwater Sampling and Purging Record

Q4AN|EVI-405-FM1

						Bore ID:	MW35
Project Name:	OMF Well Maintenance	Project Number:	60612562	Pid Name:	[redacted]	Sample Date:	11/6/24
Client:	DoD	Project Location:	RMB	Fieldwork Staff:		Well Development or Well Sampling Event? (circle)	

General Bore Information		Parameter Info.	Decontamination	Sampling Method	Hydrosleeve Info.	
Date of GW Level: 11/6/24	Bore Radius (mm): 200	Chem Kit Serial No:	☐ Decontaminated	☐ Low Flow Pump (Make: Intake depth:	Hydrosleeve Size:	Monitoring Sequence followed (number in order):
Depth to GW (m-pvc): 8.915	Screen Interval (m): 8.5-13.5	Chem Kit Model:	☐ Dedicated		Hydrosleeve Type:	
Bore Depth (m-pvc): 14.37	Casing Radius (mm): 50	Corrected Redox: Y / N	☐ Disposable	☐ Bailer ☐ Hydrosleeve	Sampling Depth (m-pvc):	Gauging
Depth to Product (m-pvc): —	Cover Type (gatic / flush):	(The correction to apply is probe dependent)	☐ Other (specify)	☐ Peristaltic Pump ☐ Waterra	Hydrosleeve Installation:	Hydrosleeve in
Product Thickness (m): —	Bore Locked (Y/ S/ NO):	Parameter method: ☐ Downhole		☐ Other (specify)	Sampling Start Time:	Hydrosleeve out
	Key Type (if applicable): —	☐ Retrieved				Parameters

Calculated bore volume (L):	Includes/ excludes bore annulus (circle)	# purge volumes removed.	Total purged volume (L)

Water Quality Parameters

Time	Cumulative Vol. Removed (L)	SWL (m-pvc)	Pump Rate	DO (ppm or mg/L)	EC (mS/cm or µS/cm)	pH	Redox (mV)	Temp °C	Odour, Colour, Turbidity
15:25	-	8.915	-	-	-	-	-	-	Start - start before development
15:30	30	-		6.85	1853	8.87	139.3	20.8	- Brown - High turb.
15:33	60	-	-	6.72	1906	8.20	117.9	20.7	"
15:36	70	-	-	7.02	1945	8.07	111.3	20.4	Brown - med turb.
15:38	85	-	-	6.83	1985	8.08	107.4	20.5	"
15:42	-	9.02m	-	-	-	-	-	-	3 well volumes = 35L. (34.65L)
Acceptable Parameter Range:				± 10%	± 3%	± 0.05	± 10 mV	± 0.2 °C	± 10% turbidity (if using probe) by eye

Analytes Sampled for:		Bottles Collected						QA/QC Information	Field Comments
Field Filtered:	Unfiltered:	x 40 mL Vial (HCl)		x 60 mL Forma		x 60 mL Plastic (HNO3)			Bore volume calculation, bore condition, take of heavy metal correction etc.
		x 40 mL Vial (H2SO4)		x 100 mL Amber		x 250 mL Plastic			

Approval and Distribution

[redacted]

[redacted]

Appendix G

Calibration Certificates

AECOM

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	GMP Wet Maintenance	Project Number:	60612563
Project Location	[redacted]	Client:	DoD
PM Name:	[redacted]	Fieldwork Staff Name:	[redacted]

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) and to denote the start of fieldworks

INSTRUMENT DETAILS

Supplier:	Aquread
Make and Model:	YSI Pro DSS
Serial Number:	19C101397

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:					
Parameter:	Acidity		Conductivity	Dissolved Oxygen	
Units:	pH	pH	uS/cm	ppm	ppm
Calibration Standard Concentration:					
Calibration Reading:					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:	11:30 13/6/24				
Parameter:	Acidity		Conductivity	Dissolved Oxygen	Redox
Units:	pH	pH	µS/cm	ppm	ppm mV
Calibration Standard Concentration:	4	7	12760	0 ~~8.90~~ 8.50	–
Bump Test Reading:	3.74	6.92	12864	0.19	248.0
Bump Test Temperature:	18.9	19.1	19.1	18.5	18.7

COMMENTS

Deviation, equipment issues, repair or maintenance performed, change of calibrator or technical support provided

Approval and Distribution

☑ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork SMP

[redacted] 13/6/24

Date

Distribution: Project Central File

AECOM

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	OMP Well Maintenance	Project Number:	60612583
Project Location:	[redacted]	Client:	DoD
PM Name:		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:	
Make and Model:	
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:					
Calibration Reading:					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen Redox	
Units	pH	pH	µS/cm	ppm	ppm mV
Calibration Standard Concentration:	4	7	27600	0	0
Bump Test Reading:	3.75	6.93	28177	0.14	242.1
Bump Test Temperature:	22.0	22.6	22.0	21.7	21.9

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]

12/6/24
Date

Distribution: Project Control File

AECOM

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	OMF Well Maintenance	Project Number:	60612563
Project Location:	[redacted]	Client:	DoD
PM Name:		Fieldwork Staff Name:	[redacted]

This calibration record is needed to record fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldwork.

INSTRUMENT DETAILS

Supplier:	
Make and Model:	
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:					
Calibration Reading:					
Calibration Temperature					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time	11/6/24				
Parameter	Acidity		Conductivity	Dissolved Oxygen	Redox
Units	pH	pH	µS/cm	ppm	ppm mV
Calibration Standard Concentration:	4	7	2760	0	
Bump Test Reading	3.72	6.86	3035	0.21	248.6
Bump Test Temperature:	18.3	18.4	17.8	18.1	17.7

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

[redacted] Date

Distribution: Project Central File

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 19C104397

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		413995	pH 7.0
2. pH 4.00		pH 4.00		414104	pH 4.0
3. ORP		234.72mV		418135/418134	234.72mV
4. EC		2760uS		414103	2760uS
5. D O		100%		water	100.6% - 763.6mmHg
6. Temp		22.4°C		MultiTherm	22.4°C

Calibrated by: [redacted]

Calibration date: 22/05/2024

Next calibration due: 21/11/2024

Oil / Water Interface Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument **Interface Meter (30M)**
Serial No. **348694**

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested

Calibrated by: [redacted]

Calibration date: 27-May-24

Next calibration due: 26/07/2024

Weed hygiene declaration

Part 1: Sale or supply of things

(Examples of 'things' include fodder, grain, seed, livestock, gravel, sand, soil, mulch, packing material, machinery, vehicles or water)

This declaration is valid for supplying the thing/things specified below from 28/5/24 to 3/6/24 (please provide dates)

1. Thing (please tick the relevant box and provide a brief description)

☐ Fodder ☐ Grain/seeds ☐ Sand/gravel ☑ Machinery ☐ Mulch ☐ Livestock ☐ Other

Amount: 1 (e.g. weight, size of load, number of items)

Description: Atlas Copco Compressor (e.g. cattle, hay, dozer)

2. Has the thing been moved through, stored in, come from, or used in a place infested with:

	Yes	No	Maybe
Parthenium		✓	
Giant rat's tail grass, American rat's tail grass, giant Parramatta grass, Parramatta grass		✓	
Prickly acacia		✓	
Other (provide details)		✓	

3. If you answered 'yes' or 'maybe' in question 2, then what actions have been taken to remove or ensure that there is no weed reproductive material*? (please tick the relevant boxes and specify steps taken)

*Please refer to the definition of 'weed reproductive material' in the explanatory notes.

☐ Nil ☐ Washing/cleaning ☐ Quarantine period ☐ Chemical treatment ☐ Certified clean ☐ Other

Steps taken:

4. To the best of my knowledge the thing described above still contains a weed listed in question 2 above.

Yes	No	Maybe
	✓	

I, [redacted]

to [redacted]

d[redacted]

e[redacted]

Part 2: Transport of contaminated things

('Vehicle' includes anything used for carrying any thing or any person by land, water or air, and includes equipment or machinery capable of moving on land)

This declaration is valid for transport and movement of vehicles and other things from Pinnacle to RAAF (please provide locations)

1. Movement of vehicles—The vehicle described as: make Atlas Copco XAVS450

registration no. or engine/frame no. PDS25 was clean* prior to entry to RAAF Amberley (destination)

*Please refer to the definition of 'clean' in the explanatory notes.

2. Transport of contaminated things—If you are transporting anything contaminated or possibly contaminated with any declared weed, what actions are being used to contain the weed reproductive material?

☑ Nil ☐ Covered with tarpaulin ☐ Enclosed within container ☐ Chemically treated ☐ Other

Actions:

I,* As Above. of

town: state: telephone:

*If same as Part 1 please write 'as above'

declare that the information that I have provided in this declaration is true and correct and I have read the accompanying explanatory notes before completing this declaration.

Weed hygiene declaration

Part 1: Sale or supply of things

(Examples of 'things' include fodder, grain, seed, livestock, gravel, sand, soil, mulch, packing material, machinery, vehicles or water)

This declaration is valid for supplying the thing/things specified below from 28/5/24 to 3/6/24 (please provide dates)

1. Thing (please tick the relevant box and provide a brief description)

☐ Fodder ☐ Grain/seeds ☐ Sand/gravel ☑ Machinery ☐ Mulch ☐ Livestock ☐ Other

Amount: 1 (e.g. weight, size of load, number of items)

Description: Geoprobe Drill rig (e.g. cattle, hay, dozer)

2. Has the thing been moved through, stored in, come from, or used in a place infested with:

	Yes	No	Maybe
Parthenium		✓	
Giant rat's tail grass, American rat's tail grass, giant Parramatta grass, Parramatta grass		✓	
Prickly acacia		✓	
Other (provide details)		✓	

3. If you answered 'yes' or 'maybe' in question 2, then what actions have been taken to remove or ensure that there is no weed reproductive material*? (please tick the relevant boxes and specify steps taken)

*Please refer to the definition of 'weed reproductive material' in the explanatory notes.

☐ Nil ☐ Washing/cleaning ☐ Quarantine period ☐ Chemical treatment ☐ Certified clean ☐ Other

Steps taken:

4. To the best of my knowledge the thing described above still contains a weed listed in question 2 above.

Yes	No	Maybe
	✓	

[redacted]

Part 2: Transport of contaminated things

('Vehicle' includes anything used for carrying any thing or any person by land, water or air, and includes equipment or machinery capable of moving on land)

This declaration is valid for transport and movement of vehicles and other things from Fonthill to RAAF (please provide locations)

1. Movement of vehicles—The vehicle described as: make Geoprobe

registration no. or engine/frame no. PDS32 was clean* prior to entry to RAAF Amberley (destination)

*Please refer to the definition of 'clean' in the explanatory notes.

2. Transport of contaminated things—If you are transporting anything contaminated or possibly contaminated with any declared weed, what actions are being used to contain the weed reproductive material?

☑ Nil ☐ Covered with tarpaulin ☐ Enclosed within container ☐ Chemically treated ☐ Other

Actions:

I,* As above of

town state telephone

*If same as Part 1 please write 'as above'

declare that the information that I have provided in this declaration is true and correct and I have read the accompanying explanatory notes before completing this declaration.

Weed hygiene declaration

Part 1: Sale or supply of things

(Examples of 'things' include fodder, grain, seed, livestock, gravel, sand, soil, mulch, packing material, machinery, vehicles or water)

This declaration is valid for supplying the thing/things specified below from 28/5/24 to 3/6/24 (please provide dates)

1. Thing (please tick the relevant box and provide a brief description)

☐ Fodder ☐ Grain/seeds ☐ Sand/gravel ☑ Machinery ☐ Mulch ☐ Livestock ☐ Other

Amount: 1 (e.g. weight, size of load, number of items)

Description: trailer with cramp (PDS50) (e.g. cattle, hay, dozer)

2. Has the thing been moved through, stored in, come from, or used in a place infested with:

	Yes	No	Maybe
Parthenium		✓	
Giant rat's tail grass, American rat's tail grass, giant Parramatta grass, Parramatta grass		✓	
Prickly acacia		✓	
Other (provide details)		✓	

3. If you answered 'yes' or 'maybe' in question 2, then what actions have been taken to remove or ensure that there is no weed reproductive material*? (please tick the relevant boxes and specify steps taken)

*Please refer to the definition of 'weed reproductive material' in the explanatory notes.

☐ Nil ☐ Washing/cleaning ☐ Quarantine period ☐ Chemical treatment ☐ Certified clean ☐ Other

Steps taken:

4. To the best of my knowledge the thing described above still contains a weed listed in question 2 above.

Yes	No	Maybe
	✓	

[redacted]

Part 2: Transport of contaminated things

('Vehicle' includes anything used for carrying any thing or any person by land, water or air, and includes equipment or machinery capable of moving on land)

This declaration is valid for transport and movement of vehicles and other things from ☐ to ☐ (please provide locations)

1. Movement of vehicles—The vehicle described as: make Drum Carrier trailer

registration no. or engine/frame no. 175 YMH was clean* prior to entry to ☐ (destination)

*Please refer to the definition of 'clean' in the explanatory notes.

2. Transport of contaminated things—If you are transporting anything contaminated or possibly contaminated with any declared weed, what actions are being used to contain the weed reproductive material?

☑ Nil ☐ Covered with tarpaulin ☐ Enclosed within container ☐ Chemically treated ☐ Other

Actions:

I,* As Above of

town state telephone

*If same as Part 1 please write 'as above'

declare that the information that I have provided in this declaration is true and correct and I have read the accompanying explanatory notes before completing this declaration.

Weed hygiene declaration

Part 1: Sale or supply of things

(Examples of 'things' include fodder, grain, seed, livestock, gravel, sand, soil, mulch, packing material, machinery, vehicles or water)

This declaration is valid for supplying the thing/things specified below from 28/5/24 to 3/6/24 (please provide dates)

1. Thing (please tick the relevant box and provide a brief description)

☐ Fodder ☐ Grain/seeds ☐ Sand/gravel ☑ Machinery ☐ Mulch ☐ Livestock ☐ Other

Amount 1 (e.g. weight, size of load, number of items)

Description Izuzu truck (e.g. cattle, hay, dozer)

2. Has the thing been moved through, stored in, come from, or used in a place infested with:

	Yes	No	Maybe
Parthenium		✓	
Giant rat's tail grass, American rat's tail grass, giant Parramatta grass, Parramatta grass		✓	
Prickly acacia		✓	
Other (provide details)		✓	

3. If you answered 'yes' or 'maybe' in question 2, then what actions have been taken to remove or ensure that there is no weed reproductive material*? (please tick the relevant boxes and specify steps taken)

*Please refer to the definition of 'weed reproductive material' in the explanatory notes.

☐ Nil ☐ Washing/cleaning ☐ Quarantine period ☐ Chemical treatment ☐ Certified clean ☐ Other

Steps taken

4. To the best of my knowledge the thing described above still contains a weed listed in question 2 above.

Yes	No	Maybe

[redacted]

Part 2: Transport of contaminated things

('Vehicle' includes anything used for carrying any thing or any person by land, water or air, and includes equipment or machinery capable of moving on land)

This declaration is valid for transport and movement of vehicles and other things from [redacted] to RAAF (please provide locations)

1. Movement of vehicles—The vehicle described as: make Izuzu 1400

registration no. or engine/frame no: 040 XIO was clean* prior to entry to RAAF Amberley (destination)

*Please refer to the definition of 'clean' in the explanatory notes.

2. Transport of contaminated things—If you are transporting anything contaminated or possibly contaminated with any declared weed, what actions are being used to contain the weed reproductive material?

☑ Nil ☐ Covered with tarpaulin ☐ Enclosed within container ☐ Chemically treated ☐ Other

Actions:

I,* As Above of

town state telephone

*If same as Part 1 please write 'as above'

declare that the information that I have provided in this declaration is true and correct and I have read the accompanying explanatory notes before completing this declaration.

Weed hygiene declaration

Part 1: Sale or supply of things

(Examples of 'things' include fodder, grain, seed, livestock, gravel, sand, soil, mulch, packing material, machinery, vehicles or water)

This declaration is valid for supplying the thing/things specified below from 28/5/24 to 3/6/24 (please provide dates)

1. Thing (please tick the relevant box and provide a brief description)

☐ Fodder ☐ Grain/seeds ☐ Sand/gravel ☑ Machinery ☐ Mulch ☐ Livestock ☐ Other

Amount: 1 (e.g. weight, size of load, number of items)

Description: Izuzu truck (e.g. cattle, hay, dozer)

2. Has the thing been moved through, stored in, come from, or used in a place infested with:

	Yes	No	Maybe
Parthenium		✓	
Giant rat's tail grass, American rat's tail grass, giant Parramatta grass, Parramatta grass		✓	
Prickly acacia		✓	
Other (provide details)		✓	

3. If you answered 'yes' or 'maybe' in question 2, then what actions have been taken to remove or ensure that there is no weed reproductive material*? (please tick the relevant boxes and specify steps taken)

*Please refer to the definition of 'weed reproductive material' in the explanatory notes.

☐ Nil ☐ Washing/cleaning ☐ Quarantine period ☐ Chemical treatment ☐ Certified clean ☐ Other

Steps taken:

4. To the best of my knowledge the thing described above still contains a weed listed in question 2 above.

Yes	No	Maybe
	✓	

[redacted]

Part 2: Transport of contaminated things

('Vehicle' includes anything used for carrying any thing or any person by land, water or air, and includes equipment or machinery capable of moving on land)

This declaration is valid for transport and movement of vehicles and other things from Pinkenba to RAAF (please provide locations)

1. Movement of vehicles—The vehicle described as: make Izuzu FRR 107/240

registration no. or engine/frame no. PDS 19 was clean* prior to entry to RAAF Amberley (destination)

*Please refer to the definition of 'clean' in the explanatory notes.

2. Transport of contaminated things—If you are transporting anything contaminated or possibly contaminated with any declared weed, what actions are being used to contain the weed reproductive material?

☑ Nil ☐ Covered with tarpaulin ☐ Enclosed within container ☐ Chemically treated ☐ Other

Actions:

I,* As Above of

town state telephone

*If same as Part 1 please write 'as above'

declare that the information that I have provided in this declaration is true and correct and I have read the accompanying explanatory notes before completing this declaration.

Explanatory notes

This declaration was developed in response to landholders, rural industry, community and government desire to minimise the impact of weeds on their business and on the environment. It has been developed to assist in preventing the spread of weeds and other contaminants, and to meet the requirements of section 45 of the *Land Protection (Pest and Stock Route Management) Act 2002*. A completed declaration provides information on the status of a 'thing', whether it is contaminated or free of weedy material. 'Part 1: Sale or supply of things' of the declaration should be completed by the supplier then given to the receiver before they receive the thing. The receiver can then make an informed decision and take precautions to prevent new infestations. It can also provide written assurance that a vehicle is clean before entering a property.

Why use this declaration?

This declaration can provide:

- a supplier with a way of meeting the requirements of section 45 (2) of the Act, if they are supplying any thing that is or could be contaminated with the weeds listed below
- a person obtaining a thing with information on whether the thing is clean of weed reproductive material or has been infested
- assurance that a vehicle was clean* prior to entry onto a property
- assurance that any contaminated or potentially contaminated thing is being moved so as not to spread the contaminant
- assurance that a product is free of other weedy reproductive material.

Section 45 of the Act makes it an offence to supply a thing that is contaminated with a Class 1 weed or any of the Class 2 weeds listed below. However, for the Class 2 weeds, a person does not breach section 45 if they provide a written notice (Part 1 of this declaration) that states that the thing is or may be contaminated. The written notice must be filled and given to the receiver before the thing is supplied.

List of Class 2 species

The following Class 2 pests are prescribed in section 45(1)(b) of the Act. These weeds are readily able to infest a wide range of products, from livestock to grain and vehicles. These weeds have a major effect on pasture production and have the capacity to invade large areas of Queensland.

Common name	Species
American rat's tail grass	*Sporobolus jacquemontii*
Giant Parramatta grass	*Sporobolus fertilis*
Giant rat's tail grass	*Sporobolus pyramidalis and S. natalensis*
Parramatta grass	*Sporobolus africanus*
Parthenium	*Parthenium hysterophorus*
Prickly acacia	*Acacia nilotica*

Across Queensland, isolated outbreaks of declared plants such as those listed above are found on properties and roadsides each year. Outbreaks of these declared plants are often located hundreds of kilometres from core infestations. These outbreaks occur as a result of machinery, livestock, vehicles, fodder, grain, material and equipment contaminated with weed seeds being transported across the state. A high percentage of seed from prickly acacia and giant rats tail grass remains viable after being eaten and excreted by cattle.

***Definitions**

Clean:

- For vehicles, machinery and equipment, clean means that no soil and/or organic matter that may contain weed reproductive material is on or in areas that are accessible during cleaning and maintenance work. A checklist and guidelines that show areas that are required to be clean are available at www.biosecurity.qld.gov.au
- A vehicle is considered to remain clean if it leaves its point of origin clean and only travels on sealed roads or well-maintained unsealed roads.
- For livestock, clean means that animals are internally and externally free of the reproductive material of any declared plant listed in the Land Protection (Pest and Stock Route Management) Regulation 2003. If livestock are suspected to be infested with a declared weed, then they should be quarantined within a weed-free paddock or pen for a 14-day period.

Weed reproductive material means any part of the plant that is capable of producing another plant by sexual or asexual reproduction. Examples include seeds, bulbs, rhizomes, tuber, stem or leaf cutting and the whole plant.

Well-maintained unsealed road means roads that do not have vegetation growing on or encroaching onto the area occupied by traffic.

For further information, please contact Biosecurity Queensland on 13 25 23.

Oil / Water Interface Meter

Air-Met Scientific Pty Ltd
1300 137 067

Instrument Geotech Interface Meter (30M)
Serial No. 4357

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: [redacted]

Calibration date: 5/07/2024

Next calibration due: 3/09/2024

Multi Parameter Water Meter

Instrument **YSI Pro DSS**
Serial No. **22D105931**

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
	Recharge OK?	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. Turbidity	✓	
	3. Conductivity	✓	
	4. D.O	✓	
	5. Temp	✓	
	6. Depth	x	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00	**NIST**	413995	pH 7.01
2. pH 4.00		pH 4.00	**NIST**	414104	pH 4.01
3. mV		231.2mV	**NIST**	418135/418134	231.2mV
4. EC		2760uS	**NIST**	414103	2760uS
5. D.O		100%	**NIST**	water	99.4% - 755.6mmHg
6. Temp		22.3°C	**NIST**	MultiTherm	22.4°C
7. Turbidity		124NTU		23j24005768	123.9NTU

Calibrated by: [redacted]

Calibration date: **5-Jul-24**

Next calibration due: **1/01/2025**

DRAFT

Appendix H

Surveying Report

Amberley

Monitoring Well	Cap Easting	Cap Northing	Surface level	Cap level	Well Level
MW002	469126.593	6944672.519	35.209	36.066	35.766
MW004	471755.791	6941559.349	26.928	27.811	27.728
MW008	470917.465	6945406.005	24.589	25.331	25.266
MW009	470347.726	6945355.3	24.346	25.17	25.082
MW014	470029.74	6943458.368	31.055	31.962	31.844
MW015	469532.603	6943921.23	34.758	34.781	34.703
MW016	472507.709	6941525.09	26.059	27.072	26.94
MW018	471661.936	6943517.999	24.395	25.218	25.127
MW019	471234.407	6942556.404	27.181	27.185	27.104
MW021	471234.407	6942556.404	20.902	20.939	20.582
MW022	471645.997	6941548.274	18.772	19.599	19.492
MW039	469819.558	6944542.79	29.431	30.288	30.192
MW042	468619.527	6943728.819	40.076	40.109	40.03
MW046	470218.076	6943933.809	26.176	26.239	26.095
MW217	470324.309	6943616.693	28.859	28.922	28.846

Damascus Barracks

Monitoring Well	Cap Easting	Cap Northing	Surface level	Cap level	Well Level
MW004	509749.415	6966306.959	2.354	3.189	3.105

Appendix I

Chain of Custody

AECOM

ANZ

FQM - Generic Chain of Custody Form

G4IN(EV3-937-FM1

CONSULTANT: AECOM	ADDRESS / OFFICE: 340 Wickham St, Fortitude Valley, 4006	SAMPLER: [redacted]	Destination Laboratory: Eurofins
PROJECT MANAGER (PM): [redacted]	SITE: Aniseed	MOBILE: [redacted] PHONE:	
PROJECT NUMBER & TASK CODE: [redacted]	P.O. NO.: 6561/2960.7.0	EMAIL REPORT TO: [redacted]	
RESULTS REQUIRED (Date): 5 Days	QUOTE NO.:	ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices):	

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL

Notes: e.g. Highly contaminated samples e.g. "High PAHs expected" Extra volume for QC or trace LORs etc

ALS (!)	SAMPLE ID	MATRIX	DATE	Time	CONTAINER INFORMATION: Type / Code	Total bottles	24 48 96 hr	HOLD
	2481.84 539_0.2_2408 03	S	3 /08/2024		1P	1	X	
	2481.84 539_0.5_2408 03	S	3 /08/2024		1P	1	X	
	2481.84 539_1.0_2408 03	S	3 /08/2024		1P	1	X	
	2481.84 539_2.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_3.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_4.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_5.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_6.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_7.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_8.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_9.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_10.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_11.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_12.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_13.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_14.0_2408 03	S	3 /08/2024		1P	1	X	
	2481.84 539_15.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_16.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 539_17.0_2408 03	S	3 /08/2024		1P	1		X
	2481.84 537_0.1_2408 04	S	4 /08/2024		1P	1	X	
	2481.84 537_0.5_2408 04	S	4 /08/2024		1P	1	X	
	2481.84 537_1.0_2408 04	S	4 /08/2024		1P	1	X	
	2481.84 537_2.0_2408 04	S	4 /08/2024		1P	1		X
	2481.84 537_3.0_2408 04	S	4 /08/2024		1P	1		X

RELINQUISHED BY		RECEIVED BY		RECEIVED BY		METHOD OF SHIPMENT
Name: [redacted]	Date: 7/6/24	Name:	Date:	Name:	Date:	Courier Note No:
Of: AECOM	Time: 1700	Of:	Time:	Of:	Time:	Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VS = VOA Vial Sodium Bisulphate Preserved; VH = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

Soil Container Codes: Jar, Bag

Date/Time: 7/6 5:05 pm

Chilled: YES / NO

Temp. 1.9 4

Correction:

Final Temp: Mustaan

COC Page 1 of 5

1106398

AECOM

FQM - Generic Chain of Custody Form

CONSULTANT: AECOM	ADDRESS / OFFICE: 540 Windsor St, Fortitude Valley, 4006	SAMPLER: [redacted]	Destination Laboratory: Eurofins
PROJECT MANAGER/PM: [redacted]	SITE: Amberley	SIGN: [redacted] PHONE:	
PROJECT NUMBER & TASK CODE: [redacted]	P.O. NO.: 60612983.7.2	EMAIL REPORT TO: [redacted]	
RESULTS REQUIRED (Date): 5 Days	QUOTE NO.:	ANALYSIS REQUIRED including NOTES (note - bottle order must be listed to attract quote price)	

FOR LABORATORY USE ONLY	COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL
COOLER SEAL (circle appropriate)	
Intact: Yes No N/A	
SAMPLE TEMPERATURE	
CHILLED: Yes No	

SAMPLE INFORMATION (note: S = Soil, W=Water)					CONTAINER INFORMATION		PFAS 533 list																										HOLD	Notes: e.g. Highly contaminated samples e.g. "High PAHs expected". Extra volume for QC or blank LCMs etc.
ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles																													
-	0861_BH537_4.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_5.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_6.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_7.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_8.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_9.0_240604	S	4/06/2024		1P	1	X																											
-	0861_BH537_10.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_11.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_12.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_13.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_14.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_15.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_16.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_17.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_18.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH537_19.0_240604	S	4/06/2024		1P	1																											X	
-	0861_BH538_0.2_240605	S	5/06/2024		1P	1	X																											
-	0861_BH538_0.5_240605	S	5/06/2024		1P	1	X																											
-	0861_BH538_1.0_240605	S	5/06/2024		1P	1	X																											
-	0861_BH538_2.0_240605	S	5/06/2024		1P	1																											X	
-	0861_BH538_3.0_240605	S	5/06/2024		1P	1																											X	
-	0861_BH538_4.0_240605	S	5/06/2024		1P	1																											X	
-	0861_BH538_5.0_240605	S	5/06/2024		1P	1																											X	
-	0861_BH538_6.0_240605	S	5/06/2024		1P	1																											X	

RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:		METHOD OF SHIPMENT:
Name:	Date:	Name:	Date:	Name:	Date:	Con. Note No:
Of:	Time:	Of:	Time:	Of:	Time:	Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; SPN = Nitric Preserved SPE; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic

V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; RS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic

F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

Soil Container Codes: Jar = Unpreserved glass jar

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ANZ

FQM - Generic Chain of Custody Form

AECOM

GIAM(EV)-007-FM1

CONSULTANT: AECOM	ADDRESS / OFFICE: 540 Wickham St, Fortitude Valley, 4006	SAMPLER: [redacted]	Destination Laboratory: Eurofins
PROJECT MANAGER (PM): [redacted]	SITE: Ambatovy	MOBILE: [redacted]	Email:
PROJECT NUMBER & TASK CODE: [redacted]	P.O. NO.: 4981256S_7.2	EMAIL REPORT TO: [redacted]	
RESULTS REQUIRED (Date): 5 Days	QUOTE NO.:	ANALYSIS REQUIRED including SURROUNDING SUITE (NOTE: additional charges may apply to subsequent analysis)	

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL

Notes: e.g. Highly contaminated samples e.g. "High PAHs expected" Extra volume for QC or trace LORs etc.

ALS ID	SAMPLE ID	MATRIX	DATE	Time	CONTAINER INFORMATION: Type / Code	Total bottles	38 PFAS	HOLD
	SB01_01 538_1.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_10.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_11.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_12.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_13.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_14.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_15.0_20240505	S	5/06/2024		1P	1	X	
	SB01_01 538_16.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 538_17.0_20240505	S	5/06/2024		1P	1		X
	SB01_01 535_0.1_20240606	S	6/06/2024		1P	1	X	
	SB01_01 535_0.5_20240606	S	6/06/2024		1P	1	X	
	SB01_01 535_1.0_20240606	S	6/06/2024		1P	1	X	
	SB01_01 535_2.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_3.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_4.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_5.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_6.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_7.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_8.0_20240606	S	6/06/2024		1P	1	X	
	SB01_01 535_9.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_10.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_11.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_12.0_20240606	S	6/06/2024		1P	1		X
	SB01_01 535_13.0_20240606	S	6/06/2024		1P	1		X

RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:		METHOD OF SHIPMENT:
Name:	Date:	Name:	Date:	Name:	Date:	Con' Note No:
Of:	Time:	Of:	Time:	Of:	Time:	Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ANP = Nitric Preserved ARC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = SOA Vial HCl Preserved; SB = VOA Vial Sodium Bisulphate Preserved; VS = SOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag
Soil Container Codes: Jar = Unpreserved glass jar

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ANZ

FQM - Generic Chain of Custody Form

CONSULTANT: AECOM	ADDRESS / OFFICE: [illegible]	SAMPLER: [redacted]	Destination Laboratory
PROJECT MANAGER (PM): [redacted]	SITE: [illegible]	MOBILE: [redacted] PHONE:	~~[illegible]~~ Eurofins.
PROJECT NUMBER & TASK CODE: [redacted]	P.O. NO.: [illegible]	EMAIL REPORT TO: [redacted]	
RESULTS REQUIRED Date: 5 Day	QUOTE NO.:	ANALYSIS REQUIRED including SUITES (note – suite codes must be listed to attract suite prices)	

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Notes: e.g. Highly contaminated samples e.g. "High PAHs expected" Extra volume for QC or trace LORs etc.

ALS ID	SAMPLE ID	MATRIX	DATE	Time	Type / Code	Total bottles	PFAS Std 28	HOLD
	[illegible]_BH 536-0.1 _ 240807	S	08/2024		1P	1	X	
	[illegible]_BH 536-0.5 _ 240807	S	08/2024		1P	1	X	
	[illegible]_BH 536-1.0 _ 240807	S	08/2024		1P	1	X	
	[illegible]_BH 536-2.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-3.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-4.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-5.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-6.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-7.0 _ 240807	S	08/2024		1P	1	X	
	[illegible]_BH 536-8.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-9.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 536-10.0 _ 240807	S	08/2024		1P	1		X
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2407	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2409	S	08/2024		1P	1		
	[illegible]_BH 2410	S	08/2024		1P	1		
	[illegible]_BH 2411	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		
	[illegible]_BH 2408	S	08/2024		1P	1		

RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:		METHOD OF SHIPMENT
Name:	Date:	Name:	Date:	Name:	Date:	Con' Note No:
Of:	Time:	Of:	Time:	Of:	Time:	Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; [illegible]
V = VOA Vial HCl Preserved; [illegible]
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; [illegible] Soil Container Codes: Jar = Unpreserved glass jar

AECOM

ANZ

FQM - Generic Chain of Custody Form

QHAN[EV]-007.F001

CONSULTANT: AECOM	ADDRESS / OFFICE: 540 Wickham St, Fortitude Valley, 4006	SAMPLER: [redacted]	Destination Laboratory
PROJECT MANAGER (PM): [redacted]	SITE: Amberley	MOBILE: [redacted] PHONE:	Eurofins
PROJECT NUMBER & TASK CODE: [redacted]	P.O. NO.: 60612563 7.2	EMAIL REPORT TO: [redacted]	
RESULTS REQUIRED (Date): 5 Days	QUOTE NO.:	ANALYSIS REQUIRED including SUITES (note – suite codes must be listed to attract suite prices)	

FOR LABORATORY USE ONLY
COOLER SEAL (circle appropriate)
Intact: Yes No N/A
SAMPLE TEMPERATURE
CHILLED: Yes No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL

Notes: e.g. Highly contaminated samples e.g. "High PAHs expected"
Extra volume for QC or trace LORs etc.

ALS ID	SAMPLE ID	MATRIX	DATE	TIME	CONTAINER INFORMATION: Type / code	CONTAINER INFORMATION: Total bottles	PFAS 24+2 SUITE	HOLD
-	0861_QC400_240603	W	08/2024		P	1	X	
-	0861_QC100_240604	S	08/2024		P	1	X	
-	0861_QC101_240606	S	08/2024		P	1	X	
-	0861_QC102_240607	S	08/2024		P	1		X
-	0861_QC300_240603	W	08/2024		P	1	X	
-	0861_QC301_240604	W	08/2024		P	1	X	
-	0861_QC302_240605	W	08/2024		P	1	X	
-	0861_QC303_240606	W	08/2024		P	1	X	
-	0861_QC304_240607	W	08/2024		P	1	X	
			08/2024					
			08/2024					
			08/2024					
			08/2024					
			08/2024					
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			08/2024					

RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:		METHOD OF SHIPMENT:
Name:	Date:	Name:	Date:	Name:	Date:	Cour' Note No:
Of:	Time:	Of:	Time:	Of:	Time:	Transport Co:

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VS = VOA Vial Sodium Bisulphate Preserved; VA = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag
Soil Container Codes: Jar = Unpreserved glass jar

COC Page 5 of 5

AU2

AQM - Generic Chain of Custody Form

TOR ALS

AECOM

Environmental Division
Brisbane
Work Order Reference
EB2420087

COC Page 1 of 1

CHAIN OF CUSTODY

CLIENT: AECOM
OFFICE:
PROJECT: [redacted] PROJECT NO: 31
ORDER NUMBER: [redacted] PURCHASE ORDER NO: 31
PROJECT MANAGER: [redacted]
SAMPLER: [redacted]
COC Emailed to ALS? YES / NO
Email Reports to (will default to PM if no other addresses are listed):
Email Invoice to (will default to PM if no other addresses are listed):
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

TURNAROUND REQUIREMENTS: Standard TAT (Lab default)
Non-Standard TAT (Lab default days)
ALS QUOTE NO.:
COUNTRY OF ORIGIN: AUS
CONTACT PH: [redacted]
SAMPLER MOBILE: [redacted]
EDD FORMAT (or default):

QUOTE/SEQUENCE NUMBER (Circle): QN: 0 2 3 4 5 6 7 / SQ: 0 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Temperature on Receipt (°C) Yes No N/A
Cooling Method: Ice Ice Packs None
Other comments:

RELINQUISHED BY: [redacted]
DATE/TIME: 11/7/21 1550

RECEIVED BY: [redacted]
DATE/TIME: 11/7 1550

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY:
DATE/TIME:

ALS USE ONLY

SAMPLE DETAILS
MATRIX: Soil/Solid (S) Water (W)

CONTAINER INFORMATION

ANALYSIS REQUIRED including SUITES (NB: Suite codes must be listed in the Analysis Request)

Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	PFAS suite
	0961-MW536-211107	11/7/21	W	2P	2	X
	0961-MW536-211107					X
	0961-MW537-211107					X
	0961-MW538-211107					X
	0961-MW539-211107					X
	0961-QC500-211107					X
	0961-QC400-211107					X
	0961-QC500-211107					X

TOTAL

Environmental Division Brisbane
Work Order Reference
EB2423759

Forward to Eurofins

Matrix: Soil/Solid = S, Water = W
Container / Client Sample ID(s): Plastic = P, Glass = G, Vial = V, Bag = B
Preservative: Nitric Acid = N, HCl = H, Sulfuric Acid = S, Unpreserved = U, Ammonium Bisulfate = A, Zinc Acetate = Z, Sodium Hydroxide = O, Other = E
Filtered: Field Filtered (F), Lab Filtered (LF)

Appendix J

Analytical Laboratory Certificates

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EB2420087**

Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60591765	Page	: 1 of 2
Order number	: 60612563, 7.2	Quote number	: EP2023AECOMAU0010 (EN/004/23)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: [redacted]		
Sampler	: [redacted]		

Dates

Date Samples Received	: 12-Jun-2024 14:30	Issue Date	: 12-Jun-2024
Client Requested Due Date	: 19-Jun-2024	Scheduled Reporting Date	: **19-Jun-2024**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 8.3, 7.0, 9.6°C - Ice Bricks present
Receipt Detail	: FOAM ESKY	No. of samples received / analysed	: 3 / 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 be advised that no sampling dates were provided on the Chain of Custody. ALS have assigned the sampling dates as per the sampling containers. If you wish to discuss this further, please contact Client Services at ALSEnviro.Brisbane@alsglobal.com**
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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.**

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)
EB2420087-001	05-Jun-2024 00:00	0861_QC200_240605		✓	✓
EB2420087-002	06-Jun-2024 00:00	0861_QC201_240606		✓	✓
EB2420087-003	07-Jun-2024 00:00	0861_QC202_240607	✓		

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]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- A4 - AU Tax Invoice (INV) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

CERTIFICATE OF ANALYSIS

Work Order	: **EB2420087**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60591765	Date Samples Received	: 12-Jun-2024 14:30
Order number	: 60612563, 7.2	Date Analysis Commenced	: 13-Jun-2024
C-O-C number	: ----	Issue Date	: 18-Jun-2024 17:23
Sampler	: [redacted]		
Site	: AMBERLEY		
Quote number	: EN/004/23		
No. of samples received	: 3		
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]	Senior Chemist - Inorganics	Brisbane Soil Preparation, Stafford, QLD
	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD
	Senior Chemist - Organics	Brisbane Soil Preparation, Stafford, QLD

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-PFAS: High matrix spike recovery for sample (EB2420059-001) deemed acceptable as all associated analyte results are less than LOR.
- EP231X PFAS: The LOR for PFHxS has been raised in sample ‘0861_QC201_240606’ (EB2420087-002) due to matrix interference.
- 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	0861_QC200_240605	0861_QC201_240606	----	----	----
				Sampling date / time	05-Jun-2024 00:00	06-Jun-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2420087-001	EB2420087-002	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**38.1**	**38.2**	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	**0.0009**	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	**0.0008**	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		**0.0002**	**0.0077**	----	----	----
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		**0.0011**	**0.0067**	----	----	----
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	<0.0003	----	----	----
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 (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0861_QC200_240605	0861_QC201_240606	----	----	----
				Sampling date / time	05-Jun-2024 00:00	06-Jun-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2420087-001	EB2420087-002	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**0.0013**	**0.0163**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0013**	**0.0144**	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0013**	**0.0153**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**113**	**104**	----	----	----
13C8-PFOA	----	0.0002	%		**114**	**102**	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

QUALITY CONTROL REPORT

Work Order	: **EB2420087**	Page	: 1 of 7
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60591765	Date Samples Received	: 12-Jun-2024
Order number	: 60612563, 7.2	Date Analysis Commenced	: 13-Jun-2024
C-O-C number	: ----	Issue Date	: 18-Jun-2024
Sampler	[redacted]		
Site	: AMBERLEY		
Quote number	: EN/004/23		
No. of samples received	: 3		
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]	Senior Chemist - Inorganics	Brisbane Soil Preparation, Stafford, QLD
	Senior Chemist - Organics	Brisbane Organics, Stafford, QLD
	Senior Chemist - Organics	Brisbane Soil Preparation, Stafford, QLD

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: 5853763)									
EB2419612-011	Anonymous	EA055: Moisture Content	----	0.1	%	0.2	0.2	0.0	No Limit
EB2420087-001	0861_QC200_240605	EA055: Moisture Content	----	0.1	%	38.1	39.1	2.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 5853702)									
EB2419958-001	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	<0.0002	<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
EB2420087-002	0861_QC201_240606	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0009	0.0008	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0008	0.0008	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0077	0.0068	12.8	0% - 20%
		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	0.0067	0.0081	19.4	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 5853702)									
EB2419958-001	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

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: 5853702) - continued									
EB2419958-001	Anonymous	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
EB2420087-002	0861_QC201_240606	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 (0.0003)*	mg/kg	<0.0003	<0.0003	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 (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: 5853702)									
EB2419958-001	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
EB2420087-002	0861_QC201_240606	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: 5853702) - continued									
EB2420087-002	0861_QC201_240606	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: 5853702)									
EB2419958-001	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
EB2420087-002	0861_QC201_240606	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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5853702)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	91.8	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	89.3	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	88.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	79.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	95.2	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	88.3	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5853702)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	83.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.6	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.2	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.8	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	81.2	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5853702)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	93.4	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.2	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.8	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.7	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5853702)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5853702) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	119	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	123	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	106	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	80.4	54.8	124

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5853702)							
EB2420059-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	92.3	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	91.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	90.7	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	86.6	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	106	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	114	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5853702)							
EB2420059-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	86.6	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	85.2	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	82.0	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	92.0	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	95.6	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	85.6	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	92.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	92.0	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	83.2	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	89.6	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	87.3	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5853702)							
EB2420059-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	86.4	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	101	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	88.9	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	93.9	70.0	130

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: 5853702) - continued							
EB2420059-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	84.0	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	86.8	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	87.2	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5853702)							
EB2420059-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.0	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	135	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	# 135	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2420087**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60591765	Date Samples Received	: 12-Jun-2024
Site	: AMBERLEY	Issue Date	: 18-Jun-2024
Sampler	: [redacted]	No. of samples received	: 3
Order number	: 60612563, 7.2	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							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EB2420059--001	Anonymous	**10:2 Fluorotelomer sulfonic acid (10:2 FTS)**	120226-60-0	135 %	70.0-130%	**Recovery greater than upper data quality objective**

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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0861_QC200_240605	**05-Jun-2024**	**----**	----	**----**	**13-Jun-2024**	19-Jun-2024	✓
HDPE Soil Jar (EA055) 0861_QC201_240606	**06-Jun-2024**	**----**	----	**----**	**13-Jun-2024**	20-Jun-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_QC200_240605	**05-Jun-2024**	**14-Jun-2024**	02-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
HDPE Soil Jar (EP231X) 0861_QC201_240606	**06-Jun-2024**	**14-Jun-2024**	03-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0861_QC200_240605	**05-Jun-2024**	**14-Jun-2024**	02-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
HDPE Soil Jar (EP231X) 0861_QC201_240606	**06-Jun-2024**	**14-Jun-2024**	03-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0861_QC200_240605	**05-Jun-2024**	**14-Jun-2024**	02-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
HDPE Soil Jar (EP231X) 0861_QC201_240606	**06-Jun-2024**	**14-Jun-2024**	03-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓

Matrix: **SOIL**

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0861_QC200_240605	**05-Jun-2024**	**14-Jun-2024**	02-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
HDPE Soil Jar (EP231X) 0861_QC201_240606	**06-Jun-2024**	**14-Jun-2024**	03-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0861_QC200_240605	**05-Jun-2024**	**14-Jun-2024**	02-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓
HDPE Soil Jar (EP231X) 0861_QC201_240606	**06-Jun-2024**	**14-Jun-2024**	03-Dec-2024	✓	**17-Jun-2024**	24-Jul-2024	✓

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	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	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*
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 LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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.

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ABN: 50 005 085 521

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
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+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: AECOM Aust Pty Ltd Brisbane
Contact name: [redacted]
Project name: [redacted]
Project ID: [redacted]
Turnaround time: 5 Day
Date/Time received Jun 7, 2024 5:05 PM
Eurofins reference 1106398

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 1.2 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Samples QC200, 201, and 202 have been forwarded to ALS. Extra samples: 0861_BH538_7.0_240605 and 0861_BH538_8.0_240605 have been received and placed on hold.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

[redacted]

Results will be delivered electronically via email to James Peachey - [redacted]

Note: A copy of these results will also be delivered to the general AECOM Aust Pty Ltd Brisbane email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone:
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	0861_BH539_0.2_240603	Jun 03, 2024		Soil	B24-Jn0022963		X	X
2	0861_BH539_0.5_240603	Jun 03, 2024		Soil	B24-Jn0022964		X	X
3	0861_BH539_1.0_240603	Jun 03, 2024		Soil	B24-Jn0022965		X	X
4	0861_BH539_14.0_240603	Jun 03, 2024		Soil	B24-Jn0022966		X	X
5	0861_BH537_0.1_240604	Jun 04, 2024		Soil	B24-Jn0022967		X	X
6	0861_BH537_0.5_240604	Jun 04, 2024		Soil	B24-Jn0022968		X	X
7	0861_BH537_1.0_240604	Jun 04, 2024		Soil	B24-Jn0022969		X	X
8	0861_BH537_9.0_240604	Jun 04, 2024		Soil	B24-Jn0022970		X	X
9	0861_BH538_	Jun 05, 2024		Soil	B24-Jn0022971		X	X

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Project Name: AMBERLEY
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Order No.: 60612563 7.2
Report #: 1106398
Phone:
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
	0.2_240605							
10	0861_BH538_0.5_240605	Jun 05, 2024		Soil	B24-Jn0022972		X	X
11	0861_BH538_1.0_240605	Jun 05, 2024		Soil	B24-Jn0022973		X	X
12	0861_BH538_15.0_240605	Jun 05, 2024		Soil	B24-Jn0022974		X	X
13	0861_BH535_0.1_240606	Jun 06, 2024		Soil	B24-Jn0022975		X	X
14	0861_BH535_0.5_240606	Jun 06, 2024		Soil	B24-Jn0022976		X	X
15	0861_BH535_1.0_240606	Jun 06, 2024		Soil	B24-Jn0022977		X	X
16	0861_BH535_8.0_240606	Jun 06, 2024		Soil	B24-Jn0022978		X	X
17	0861_BH536_0.1_240607	Jun 07, 2024		Soil	B24-Jn0022979		X	X
18	0861_BH536_0.5_240607	Jun 07, 2024		Soil	B24-Jn0022980		X	X
19	0861_BH536_	Jun 07, 2024		Soil	B24-Jn0022981		X	X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
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Phone:
Fax:

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
19	0861_BH536_1.0_240607	Jun 07, 2024		Soil	B24-Jn0022981			
20	0861_BH536_7.0_240607	Jun 07, 2024		Soil	B24-Jn0022982		X	X
21	0861_QC400_240603	Not Provided		Water	B24-Jn0022983			X
22	0861_QC100_240605	Not Provided		Soil	B24-Jn0022984		X	X
23	0861_QC101_240606	Not Provided		Soil	B24-Jn0022985		X	X
24	0861_QC300_240603	Not Provided		Water	B24-Jn0022986			X
25	0861_QC301_240604	Not Provided		Water	B24-Jn0022987			X
26	0861_QC302_240605	Not Provided		Water	B24-Jn0022988			X
27	0861_QC303_240606	Not Provided		Water	B24-Jn0022989			X
28	0861_QC304_240607	Not Provided		Water	B24-Jn0022990			X

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax:

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
29	0861_BH539_2.0_240603	Jun 03, 2024		Soil	B24-Jn0022991	X		
30	0861_BH539_3.0_240603	Jun 03, 2024		Soil	B24-Jn0022992	X		
31	0861_BH539_4.0_240603	Jun 03, 2024		Soil	B24-Jn0022993	X		
32	0861_BH539_5.0_240603	Jun 03, 2024		Soil	B24-Jn0022994	X		
33	0861_BH539_6.0_240603	Jun 03, 2024		Soil	B24-Jn0022995	X		
34	0861_BH539_7.0_240603	Jun 03, 2024		Soil	B24-Jn0022996	X		
35	0861_BH539_8.0_240603	Jun 03, 2024		Soil	B24-Jn0022997	X		
36	0861_BH539_9.0_240603	Jun 03, 2024		Soil	B24-Jn0022998	X		
37	0861_BH539_10.0_240603	Jun 03, 2024		Soil	B24-Jn0022999	X		
38	0861_BH539_11.0_240603	Jun 03, 2024		Soil	B24-Jn0023000	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
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Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
39	0861_BH539_12.0_240603	Jun 03, 2024		Soil	B24-Jn0023001	X		
40	0861_BH539_13.0_240603	Jun 03, 2024		Soil	B24-Jn0023002	X		
41	0861_BH539_15.0_240603	Jun 03, 2024		Soil	B24-Jn0023003	X		
42	0861_BH539_16.0_240603	Jun 03, 2024		Soil	B24-Jn0023004	X		
43	0861_BH539_17.0_240603	Jun 03, 2024		Soil	B24-Jn0023005	X		
44	0861_BH537_2.0_240604	Jun 04, 2024		Soil	B24-Jn0023006	X		
45	0861_BH537_3.0_240604	Jun 04, 2024		Soil	B24-Jn0023007	X		
46	0861_BH537_4.0_240604	Jun 04, 2024		Soil	B24-Jn0023008	X		
47	0861_BH537_5.0_240604	Jun 04, 2024		Soil	B24-Jn0023009	X		
48	0861_BH537_6.0_240604	Jun 04, 2024		Soil	B24-Jn0023010	X		

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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax:

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
49	0861_BH537_7.0_240604	Jun 04, 2024		Soil	B24-Jn0023011	X		
50	0861_BH537_8.0_240604	Jun 04, 2024		Soil	B24-Jn0023012	X		
51	0861_BH537_10.0_240604	Jun 04, 2024		Soil	B24-Jn0023013	X		
52	0861_BH537_11.0_240604	Jun 04, 2024		Soil	B24-Jn0023014	X		
53	0861_BH537_12.0_240604	Jun 04, 2024		Soil	B24-Jn0023015	X		
54	0861_BH537_13.0_240604	Jun 04, 2024		Soil	B24-Jn0023016	X		
55	0861_BH537_14.0_240604	Jun 04, 2024		Soil	B24-Jn0023017	X		
56	0861_BH537_15.0_240604	Jun 04, 2024		Soil	B24-Jn0023018	X		
57	0861_BH537_16.0_240604	Jun 04, 2024		Soil	B24-Jn0023019	X		
58	0861_BH537_17.0_240604	Jun 04, 2024		Soil	B24-Jn0023020	X		

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Company Name: [redacted]
Address: [redacted]

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
59	0861_BH537_18.0_240604	Jun 04, 2024		Soil	B24-Jn0023021	X		
60	0861_BH537_19.0_240604	Jun 04, 2024		Soil	B24-Jn0023022	X		
61	0861_BH538_2.0_240605	Jun 05, 2024		Soil	B24-Jn0023023	X		
62	0861_BH538_3.0_240605	Jun 05, 2024		Soil	B24-Jn0023024	X		
63	0861_BH538_4.0_240605	Jun 05, 2024		Soil	B24-Jn0023025	X		
64	0861_BH538_5.0_240605	Jun 05, 2024		Soil	B24-Jn0023026	X		
65	0861_BH538_6.0_240605	Jun 05, 2024		Soil	B24-Jn0023027	X		
66	0861_BH538_7.0_240605	Jun 05, 2024		Soil	B24-Jn0023028	X		
67	0861_BH538_8.0_240605	Jun 05, 2024		Soil	B24-Jn0023029	X		
68	0861_BH538_9.0_240605	Jun 05, 2024		Soil	B24-Jn0023030	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
69	0861_BH538_10.0_240605	Jun 05, 2024		Soil	B24-Jn0023031	X		
70	0861_BH538_11.0_240605	Jun 05, 2024		Soil	B24-Jn0023032	X		
71	0861_BH538_12.0_240605	Jun 05, 2024		Soil	B24-Jn0023033	X		
72	0861_BH538_13.0_240605	Jun 05, 2024		Soil	B24-Jn0023034	X		
73	0861_BH538_14.0_240605	Jun 05, 2024		Soil	B24-Jn0023035	X		
74	0861_BH538_16.0_240605	Jun 05, 2024		Soil	B24-Jn0023036	X		
75	0861_BH538_17.0_240605	Jun 05, 2024		Soil	B24-Jn0023037	X		
76	0861_BH535_2.0_240606	Jun 06, 2024		Soil	B24-Jn0023038	X		
77	0861_BH535_3.0_240606	Jun 06, 2024		Soil	B24-Jn0023039	X		
78	0861_BH535_4.0_240606	Jun 06, 2024		Soil	B24-Jn0023040	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
79	0861_BH535_5.0_240606	Jun 06, 2024		Soil	B24-Jn0023041	X		
80	0861_BH535_6.0_240606	Jun 06, 2024		Soil	B24-Jn0023042	X		
81	0861_BH535_7.0_240606	Jun 06, 2024		Soil	B24-Jn0023043	X		
82	0861_BH535_9.0_240606	Jun 06, 2024		Soil	B24-Jn0023044	X		
83	0861_BH535_10.0_240606	Jun 06, 2024		Soil	B24-Jn0023045	X		
84	0861_BH535_11.0_240606	Jun 06, 2024		Soil	B24-Jn0023046	X		
85	0861_BH535_12.0_240606	Jun 06, 2024		Soil	B24-Jn0023047	X		
86	0861_BH535_13.0_240606	Jun 06, 2024		Soil	B24-Jn0023048	X		
87	0861_BH536_2.0_240607	Jun 07, 2024		Soil	B24-Jn0023049	X		
88	0861_BH536_3.0_240607	Jun 07, 2024		Soil	B24-Jn0023050	X		

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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
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Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
89	0861_BH536_4.0_240607	Jun 07, 2024		Soil	B24-Jn0023051	X		
90	0861_BH536_5.0_240607	Jun 07, 2024		Soil	B24-Jn0023052	X		
91	0861_BH536_6.0_240607	Jun 07, 2024		Soil	B24-Jn0023053	X		
92	0861_BH536_8.0_240607	Jun 07, 2024		Soil	B24-Jn0023054	X		
93	0861_BH536_9.0_240607	Jun 07, 2024		Soil	B24-Jn0023055	X		
94	0861_BH536_10.0_240607	Jun 07, 2024		Soil	B24-Jn0023056	X		
95	0861_QC102_240607	Not Provided		Soil	B24-Jn0023057	X		
Test Counts						67	22	28

[redacted]

NATA Accredited
Accreditation Number 1261
Site Number 20794 & 2780

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: [redacted]

Report **1106398-S**
Project name AMBERLEY
Project ID 60591765
Received Date Jun 07, 2024

Client Sample ID			**0861_BH539_0.2_240603**	**0861_BH539_0.5_240603**	**0861_BH539_1.0_240603**	**0861_BH539_14.0_240603**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B24-Jn0022963**	**B24-Jn0022964**	**B24-Jn0022965**	**B24-Jn0022966**
Date Sampled			**Jun 03, 2024**	**Jun 03, 2024**	**Jun 03, 2024**	**Jun 03, 2024**
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	6.9	21	20	22
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	89	77	94	52
13C5-PFPeA (surr.)	1	%	105	60	119	59
13C5-PFHxA (surr.)	1	%	115	47	117	77
13C4-PFHpA (surr.)	1	%	121	67	129	54
13C8-PFOA (surr.)	1	%	118	80	124	67
13C5-PFNA (surr.)	1	%	121	84	130	57
13C6-PFDA (surr.)	1	%	129	82	141	68
13C2-PFUnDA (surr.)	1	%	124	59	142	64
13C2-PFDoDA (surr.)	1	%	120	89	125	71
13C2-PFTeDA (surr.)	1	%	128	94	113	56
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10

Client Sample ID			0861_BH539_0.2_240603	0861_BH539_0.5_240603	0861_BH539_1.0_240603	0861_BH539_14.0_240603
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022963	B24-Jn0022964	B24-Jn0022965	B24-Jn0022966
Date Sampled			Jun 03, 2024	Jun 03, 2024	Jun 03, 2024	Jun 03, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
13C8-FOSA (surr.)	1	%	80	56	108	52
D3-N-MeFOSA (surr.)	1	%	105	83	140	57
D5-N-EtFOSA (surr.)	1	%	145	68	150	86
D7-N-MeFOSE (surr.)	1	%	144	53	145	72
D9-N-EtFOSE (surr.)	1	%	142	37	136	42
D5-N-EtFOSAA (surr.)	1	%	137	84	140	79
D3-N-MeFOSAA (surr.)	1	%	93	50	99	57
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	144	76	142	58
18O2-PFHxS (surr.)	1	%	122	72	128	61
13C8-PFOS (surr.)	1	%	115	66	121	67
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	125	71	93	61
13C2-6:2 FTSA (surr.)	1	%	119	71	134	69
13C2-8:2 FTSA (surr.)	1	%	115	65	110	74
13C2-10:2 FTSA (surr.)	1	%	103	61	96	82
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			0861_BH537_0.1_240604	0861_BH537_0.5_240604	0861_BH537_1.0_240604	0861_BH537_9.0_240604
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022967	B24-Jn0022968	B24-Jn0022969	B24-Jn0022970
Date Sampled			Jun 04, 2024	Jun 04, 2024	Jun 04, 2024	Jun 04, 2024
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	5.9	5.7	20	21
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	10.0	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	94	94	84	73
13C5-PFPeA (surr.)	1	%	93	117	72	59
13C5-PFHxA (surr.)	1	%	55	120	54	69
13C4-PFHpA (surr.)	1	%	94	118	80	119
13C8-PFOA (surr.)	1	%	95	123	93	111
13C5-PFNA (surr.)	1	%	93	131	99	111
13C6-PFDA (surr.)	1	%	94	131	83	103
13C2-PFUnDA (surr.)	1	%	66	133	61	79
13C2-PFDoDA (surr.)	1	%	98	119	84	106
13C2-PFTeDA (surr.)	1	%	118	121	89	123
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	87	104	77	93
D3-N-MeFOSA (surr.)	1	%	91	140	90	132
D5-N-EtFOSA (surr.)	1	%	88	142	66	84
D7-N-MeFOSE (surr.)	1	%	91	143	79	121
D9-N-EtFOSE (surr.)	1	%	46	143	46	53
D5-N-EtFOSAA (surr.)	1	%	118	137	94	115
D3-N-MeFOSAA (surr.)	1	%	65	95	54	69
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	[N09]29	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5

Client Sample ID			0861_BH537_0.1_240604	0861_BH537_0.5_240604	0861_BH537_1.0_240604	0861_BH537_9.0_240604
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022967	B24-Jn0022968	B24-Jn0022969	B24-Jn0022970
Date Sampled			Jun 04, 2024	Jun 04, 2024	Jun 04, 2024	Jun 04, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	[N09]290	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	97	139	84	101
18O2-PFHxS (surr.)	1	%	85	123	76	98
13C8-PFOS (surr.)	1	%	79	113	77	81
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	85	121	71	60
13C2-6:2 FTSA (surr.)	1	%	82	123	76	68
13C2-8:2 FTSA (surr.)	1	%	89	100	80	89
13C2-10:2 FTSA (surr.)	1	%	78	99	68	85
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	319	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	290	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	319	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	329	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	329	< 50

Client Sample ID			0861_BH538_0.2_240605	0861_BH538_0.5_240605	0861_BH538_1.0_240605	0861_BH538_15.0_240605
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022971	B24-Jn0022972	B24-Jn0022973	B24-Jn0022974
Date Sampled			Jun 05, 2024	Jun 05, 2024	Jun 05, 2024	Jun 05, 2024
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	36	31	30	29
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	99	74	73	50
13C5-PFPeA (surr.)	1	%	118	85	58	12
13C5-PFHxA (surr.)	1	%	65	91	64	63
13C4-PFHpA (surr.)	1	%	102	70	97	115

Client Sample ID			0861_BH538_0.2_240605	0861_BH538_0.5_240605	0861_BH538_1.0_240605	0861_BH538_15.0_240605
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022971	B24-Jn0022972	B24-Jn0022973	B24-Jn0022974
Date Sampled			Jun 05, 2024	Jun 05, 2024	Jun 05, 2024	Jun 05, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C8-PFOA (surr.)	1	%	115	77	110	115
13C5-PFNA (surr.)	1	%	107	67	111	113
13C6-PFDA (surr.)	1	%	103	86	96	100
13C2-PFUnDA (surr.)	1	%	65	87	72	78
13C2-PFDoDA (surr.)	1	%	98	91	87	103
13C2-PFTeDA (surr.)	1	%	102	64	118	117
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	86	77	79	104
D3-N-MeFOSA (surr.)	1	%	92	61	114	138
D5-N-EtFOSA (surr.)	1	%	78	113	85	75
D7-N-MeFOSE (surr.)	1	%	85	89	101	101
D9-N-EtFOSE (surr.)	1	%	45	59	51	57
D5-N-EtFOSAA (surr.)	1	%	107	50	76	106
D3-N-MeFOSAA (surr.)	1	%	61	35	44	68
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	97	69	100	104
18O2-PFHxS (surr.)	1	%	90	72	94	102
13C8-PFOS (surr.)	1	%	90	73	77	73
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	87	100	75	50
13C2-6:2 FTSA (surr.)	1	%	101	75	76	68
13C2-8:2 FTSA (surr.)	1	%	103	104	83	70
13C2-10:2 FTSA (surr.)	1	%	73	96	75	79

Client Sample ID			0861_BH538_0.2_240605	0861_BH538_0.5_240605	0861_BH538_1.0_240605	0861_BH538_15.0_240605
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B24-Jn0022971**	**B24-Jn0022972**	**B24-Jn0022973**	**B24-Jn0022974**
Date Sampled			**Jun 05, 2024**	**Jun 05, 2024**	**Jun 05, 2024**	**Jun 05, 2024**
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			0861_BH535_0.1_240606	0861_BH535_0.5_240606	0861_BH535_1.0_240606	0861_BH535_8.0_240606
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B24-Jn0022975**	**B24-Jn0022976**	**B24-Jn0022977**	**B24-Jn0022978**
Date Sampled			**Jun 06, 2024**	**Jun 06, 2024**	**Jun 06, 2024**	**Jun 06, 2024**
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	26	25	27	9.2
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	59	74	78	74
13C5-PFPeA (surr.)	1	%	60	99	99	62
13C5-PFHxA (surr.)	1	%	70	93	106	52
13C4-PFHpA (surr.)	1	%	53	109	91	87
13C8-PFOA (surr.)	1	%	63	114	104	90
13C5-PFNA (surr.)	1	%	50	118	91	90
13C6-PFDA (surr.)	1	%	60	131	100	89
13C2-PFUnDA (surr.)	1	%	52	129	115	61
13C2-PFDoDA (surr.)	1	%	55	99	117	74
13C2-PFTeDA (surr.)	1	%	42	103	97	102
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10

Client Sample ID			0861_BH535_0.1_240606	0861_BH535_0.5_240606	0861_BH535_1.0_240606	0861_BH535_8.0_240606
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022975	B24-Jn0022976	B24-Jn0022977	B24-Jn0022978
Date Sampled			Jun 06, 2024	Jun 06, 2024	Jun 06, 2024	Jun 06, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
13C8-FOSA (surr.)	1	%	54	104	93	69
D3-N-MeFOSA (surr.)	1	%	47	124	93	100
D5-N-EtFOSA (surr.)	1	%	72	134	147	74
D7-N-MeFOSE (surr.)	1	%	55	134	113	77
D9-N-EtFOSE (surr.)	1	%	31	114	84	47
D5-N-EtFOSAA (surr.)	1	%	69	135	137	96
D3-N-MeFOSAA (surr.)	1	%	51	92	95	56
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	[N09]6.5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	[N09]< 5	[N09]6.4	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	53	135	98	75
18O2-PFHxS (surr.)	1	%	53	118	96	76
13C8-PFOS (surr.)	1	%	61	112	100	71
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	88	84	86	63
13C2-6:2 FTSA (surr.)	1	%	88	98	96	65
13C2-8:2 FTSA (surr.)	1	%	81	110	120	68
13C2-10:2 FTSA (surr.)	1	%	79	92	135	65
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	12.9	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	6.4	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	12.9	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	12.9	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			0861_BH536_0.1_240607	0861_BH536_0.5_240607	0861_BH536_1.0_240607	0861_BH536_7.0_240607
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B24-Jn0022979**	**B24-Jn0022980**	**B24-Jn0022981**	**B24-Jn0022982**
Date Sampled			**Jun 07, 2024**	**Jun 07, 2024**	**Jun 07, 2024**	**Jun 07, 2024**
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	27	28	29	18
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	105	112	94	75
13C5-PFPeA (surr.)	1	%	118	129	102	67
13C5-PFHxA (surr.)	1	%	118	132	132	54
13C4-PFHpA (surr.)	1	%	124	129	94	82
13C8-PFOA (surr.)	1	%	126	131	120	86
13C5-PFNA (surr.)	1	%	146	135	97	90
13C6-PFDA (surr.)	1	%	144	134	109	80
13C2-PFUnDA (surr.)	1	%	122	143	119	59
13C2-PFDoDA (surr.)	1	%	117	123	123	76
13C2-PFTeDA (surr.)	1	%	108	108	104	87
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	84	99	92	75
D3-N-MeFOSA (surr.)	1	%	115	137	90	87
D5-N-EtFOSA (surr.)	1	%	115	131	162	76
D7-N-MeFOSE (surr.)	1	%	123	142	133	89
D9-N-EtFOSE (surr.)	1	%	119	147	81	39
D5-N-EtFOSAA (surr.)	1	%	145	138	60	92
D3-N-MeFOSAA (surr.)	1	%	108	96	31	57
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5

Client Sample ID			0861_BH536_0.1_240607	0861_BH536_0.5_240607	0861_BH536_1.0_240607	0861_BH536_7.0_240607
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B24-Jn0022979	B24-Jn0022980	B24-Jn0022981	B24-Jn0022982
Date Sampled			Jun 07, 2024	Jun 07, 2024	Jun 07, 2024	Jun 07, 2024
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	[N09]7.3	[N09]14	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	143	133	94	69
18O2-PFHxS (surr.)	1	%	116	125	106	73
13C8-PFOS (surr.)	1	%	103	115	110	66
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	133	126	113	72
13C2-6:2 FTSA (surr.)	1	%	142	149	111	65
13C2-8:2 FTSA (surr.)	1	%	160	102	135	70
13C2-10:2 FTSA (surr.)	1	%	97	105	140	67
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	7.3	14	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	7.3	14	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	7.3	14	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	14	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			0861_QC100_240605	0861_QC101_240606
Sample Matrix			Soil	Soil
Eurofins Sample No.			B24-Jn0022984	B24-Jn0022985
Date Sampled			Not Provided[I12]	Not Provided[I12]
Test/Reference	LOR	Unit		
Sample Properties				
% Moisture	1	%	35	27
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5
13C4-PFBA (surr.)	1	%	88	64
13C5-PFPeA (surr.)	1	%	81	40
13C5-PFHxA (surr.)	1	%	62	54
13C4-PFHpA (surr.)	1	%	103	88

Client Sample ID			0861_QC100_240605	0861_QC101_240606
Sample Matrix			Soil	Soil
Eurofins Sample No.			B24-Jn0022984	B24-Jn0022985
Date Sampled			Not Provided[I12]	Not Provided[I12]
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
13C8-PFOA (surr.)	1	%	91	111
13C5-PFNA (surr.)	1	%	103	102
13C6-PFDA (surr.)	1	%	89	83
13C2-PFUnDA (surr.)	1	%	60	66
13C2-PFDoDA (surr.)	1	%	90	85
13C2-PFTeDA (surr.)	1	%	95	96
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10
13C8-FOSA (surr.)	1	%	68	82
D3-N-MeFOSA (surr.)	1	%	90	106
D5-N-EtFOSA (surr.)	1	%	69	72
D7-N-MeFOSE (surr.)	1	%	75	79
D9-N-EtFOSE (surr.)	1	%	41	48
D5-N-EtFOSAA (surr.)	1	%	95	93
D3-N-MeFOSAA (surr.)	1	%	57	58
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	[N09]6.0
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	[N09]8.5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5
13C3-PFBS (surr.)	1	%	88	92
18O2-PFHxS (surr.)	1	%	87	87
13C8-PFOS (surr.)	1	%	74	71
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	74	57
13C2-6:2 FTSA (surr.)	1	%	90	84
13C2-8:2 FTSA (surr.)	1	%	80	72
13C2-10:2 FTSA (surr.)	1	%	71	72

Client Sample ID			0861_QC100_240605	0861_QC101_240606
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**B24-Jn0022984**	**B24-Jn0022985**
Date Sampled			**Not Provided**[I12]	**Not Provided**[I12]
Test/Reference	LOR	Unit		
PFASs Summations				
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	14.5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	8.5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	14.5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	14.5
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
% Moisture	Brisbane	Jun 11, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jun 14, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jun 14, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jun 14, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jun 14, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone:
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	0861_BH539_0.2_240603	Jun 03, 2024		Soil	B24-Jn0022963		X	X
2	0861_BH539_0.5_240603	Jun 03, 2024		Soil	B24-Jn0022964		X	X
3	0861_BH539_1.0_240603	Jun 03, 2024		Soil	B24-Jn0022965		X	X
4	0861_BH539_14.0_240603	Jun 03, 2024		Soil	B24-Jn0022966		X	X
5	0861_BH537_0.1_240604	Jun 04, 2024		Soil	B24-Jn0022967		X	X
6	0861_BH537_0.5_240604	Jun 04, 2024		Soil	B24-Jn0022968		X	X
7	0861_BH537_1.0_240604	Jun 04, 2024		Soil	B24-Jn0022969		X	X
8	0861_BH537_9.0_240604	Jun 04, 2024		Soil	B24-Jn0022970		X	X
9	0861_BH538_	Jun 05, 2024		Soil	B24-Jn0022971		X	X

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone:
Fax: [redacted]

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
	0.2_240605							
10	0861_BH538_0.5_240605	Jun 05, 2024		Soil	B24-Jn0022972		X	X
11	0861_BH538_1.0_240605	Jun 05, 2024		Soil	B24-Jn0022973		X	X
12	0861_BH538_15.0_240605	Jun 05, 2024		Soil	B24-Jn0022974		X	X
13	0861_BH535_0.1_240606	Jun 06, 2024		Soil	B24-Jn0022975		X	X
14	0861_BH535_0.5_240606	Jun 06, 2024		Soil	B24-Jn0022976		X	X
15	0861_BH535_1.0_240606	Jun 06, 2024		Soil	B24-Jn0022977		X	X
16	0861_BH535_8.0_240606	Jun 06, 2024		Soil	B24-Jn0022978		X	X
17	0861_BH536_0.1_240607	Jun 07, 2024		Soil	B24-Jn0022979		X	X
18	0861_BH536_0.5_240607	Jun 07, 2024		Soil	B24-Jn0022980		X	X
19	0861_BH536_	Jun 07, 2024		Soil	B24-Jn0022981		X	X

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Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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NATA# 2561
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Auckland	Auckland (Focus)	Christchurch	Tauranga
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone: [redacted]
Fax:

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
19	0861_BH536_1.0_240607	Jun 07, 2024		Soil	B24-Jn0022981			
20	0861_BH536_7.0_240607	Jun 07, 2024		Soil	B24-Jn0022982		X	X
21	0861_QC400_240603	Not Provided		Water	B24-Jn0022983			X
22	0861_QC100_240605	Not Provided		Soil	B24-Jn0022984		X	X
23	0861_QC101_240606	Not Provided		Soil	B24-Jn0022985		X	X
24	0861_QC300_240603	Not Provided		Water	B24-Jn0022986			X
25	0861_QC301_240604	Not Provided		Water	B24-Jn0022987			X
26	0861_QC302_240605	Not Provided		Water	B24-Jn0022988			X
27	0861_QC303_240606	Not Provided		Water	B24-Jn0022989			X
28	0861_QC304_240607	Not Provided		Water	B24-Jn0022990			X

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
Report #: 1106398
Phone:
Fax:

Received: Jun 7, 2024 5:05 PM
Due: Jun 14, 2024
Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
29	0861_BH539_2.0_240603	Jun 03, 2024		Soil	B24-Jn0022991	X		
30	0861_BH539_3.0_240603	Jun 03, 2024		Soil	B24-Jn0022992	X		
31	0861_BH539_4.0_240603	Jun 03, 2024		Soil	B24-Jn0022993	X		
32	0861_BH539_5.0_240603	Jun 03, 2024		Soil	B24-Jn0022994	X		
33	0861_BH539_6.0_240603	Jun 03, 2024		Soil	B24-Jn0022995	X		
34	0861_BH539_7.0_240603	Jun 03, 2024		Soil	B24-Jn0022996	X		
35	0861_BH539_8.0_240603	Jun 03, 2024		Soil	B24-Jn0022997	X		
36	0861_BH539_9.0_240603	Jun 03, 2024		Soil	B24-Jn0022998	X		
37	0861_BH539_10.0_240603	Jun 03, 2024		Soil	B24-Jn0022999	X		
38	0861_BH539_11.0_240603	Jun 03, 2024		Soil	B24-Jn0023000	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Company Name: [redacted]
Address: [redacted]

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
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Phone: [redacted]
Fax:

Received: Jun 7, 2024 5:05 PM
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Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
39	0861_BH539_12.0_240603	Jun 03, 2024		Soil	B24-Jn0023001	X		
40	0861_BH539_13.0_240603	Jun 03, 2024		Soil	B24-Jn0023002	X		
41	0861_BH539_15.0_240603	Jun 03, 2024		Soil	B24-Jn0023003	X		
42	0861_BH539_16.0_240603	Jun 03, 2024		Soil	B24-Jn0023004	X		
43	0861_BH539_17.0_240603	Jun 03, 2024		Soil	B24-Jn0023005	X		
44	0861_BH537_2.0_240604	Jun 04, 2024		Soil	B24-Jn0023006	X		
45	0861_BH537_3.0_240604	Jun 04, 2024		Soil	B24-Jn0023007	X		
46	0861_BH537_4.0_240604	Jun 04, 2024		Soil	B24-Jn0023008	X		
47	0861_BH537_5.0_240604	Jun 04, 2024		Soil	B24-Jn0023009	X		
48	0861_BH537_6.0_240604	Jun 04, 2024		Soil	B24-Jn0023010	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Company Name: [redacted]
Address: [redacted]

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
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Received: Jun 7, 2024 5:05 PM
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Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
49	0861_BH537_7.0_240604	Jun 04, 2024		Soil	B24-Jn0023011	X		
50	0861_BH537_8.0_240604	Jun 04, 2024		Soil	B24-Jn0023012	X		
51	0861_BH537_10.0_240604	Jun 04, 2024		Soil	B24-Jn0023013	X		
52	0861_BH537_11.0_240604	Jun 04, 2024		Soil	B24-Jn0023014	X		
53	0861_BH537_12.0_240604	Jun 04, 2024		Soil	B24-Jn0023015	X		
54	0861_BH537_13.0_240604	Jun 04, 2024		Soil	B24-Jn0023016	X		
55	0861_BH537_14.0_240604	Jun 04, 2024		Soil	B24-Jn0023017	X		
56	0861_BH537_15.0_240604	Jun 04, 2024		Soil	B24-Jn0023018	X		
57	0861_BH537_16.0_240604	Jun 04, 2024		Soil	B24-Jn0023019	X		
58	0861_BH537_17.0_240604	Jun 04, 2024		Soil	B24-Jn0023020	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: [redacted]
Address:

Project Name: AMBERLEY
Project ID: 60591765

Order No.: 60612563 7.2
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Received: Jun 7, 2024 5:05 PM
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Priority: 5 Day
Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
59	0861_BH537_18.0_240604	Jun 04, 2024		Soil	B24-Jn0023021	X		
60	0861_BH537_19.0_240604	Jun 04, 2024		Soil	B24-Jn0023022	X		
61	0861_BH538_2.0_240605	Jun 05, 2024		Soil	B24-Jn0023023	X		
62	0861_BH538_3.0_240605	Jun 05, 2024		Soil	B24-Jn0023024	X		
63	0861_BH538_4.0_240605	Jun 05, 2024		Soil	B24-Jn0023025	X		
64	0861_BH538_5.0_240605	Jun 05, 2024		Soil	B24-Jn0023026	X		
65	0861_BH538_6.0_240605	Jun 05, 2024		Soil	B24-Jn0023027	X		
66	0861_BH538_7.0_240605	Jun 05, 2024		Soil	B24-Jn0023028	X		
67	0861_BH538_8.0_240605	Jun 05, 2024		Soil	B24-Jn0023029	X		
68	0861_BH538_9.0_240605	Jun 05, 2024		Soil	B24-Jn0023030	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079 & 25289

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Fax:

Received: Jun 7, 2024 5:05 PM
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Contact Name: [redacted]

Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
69	0861_BH538_10.0_240605	Jun 05, 2024		Soil	B24-Jn0023031	X		
70	0861_BH538_11.0_240605	Jun 05, 2024		Soil	B24-Jn0023032	X		
71	0861_BH538_12.0_240605	Jun 05, 2024		Soil	B24-Jn0023033	X		
72	0861_BH538_13.0_240605	Jun 05, 2024		Soil	B24-Jn0023034	X		
73	0861_BH538_14.0_240605	Jun 05, 2024		Soil	B24-Jn0023035	X		
74	0861_BH538_16.0_240605	Jun 05, 2024		Soil	B24-Jn0023036	X		
75	0861_BH538_17.0_240605	Jun 05, 2024		Soil	B24-Jn0023037	X		
76	0861_BH535_2.0_240606	Jun 06, 2024		Soil	B24-Jn0023038	X		
77	0861_BH535_3.0_240606	Jun 06, 2024		Soil	B24-Jn0023039	X		
78	0861_BH535_4.0_240606	Jun 06, 2024		Soil	B24-Jn0023040	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
79	0861_BH535_5.0_240606	Jun 06, 2024		Soil	B24-Jn0023041	X		
80	0861_BH535_6.0_240606	Jun 06, 2024		Soil	B24-Jn0023042	X		
81	0861_BH535_7.0_240606	Jun 06, 2024		Soil	B24-Jn0023043	X		
82	0861_BH535_9.0_240606	Jun 06, 2024		Soil	B24-Jn0023044	X		
83	0861_BH535_10.0_240606	Jun 06, 2024		Soil	B24-Jn0023045	X		
84	0861_BH535_11.0_240606	Jun 06, 2024		Soil	B24-Jn0023046	X		
85	0861_BH535_12.0_240606	Jun 06, 2024		Soil	B24-Jn0023047	X		
86	0861_BH535_13.0_240606	Jun 06, 2024		Soil	B24-Jn0023048	X		
87	0861_BH536_2.0_240607	Jun 07, 2024		Soil	B24-Jn0023049	X		
88	0861_BH536_3.0_240607	Jun 07, 2024		Soil	B24-Jn0023050	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Eurofins Analytical Services Manager : [redacted]

Sample Detail						HOLD	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X
89	0861_BH536_4.0_240607	Jun 07, 2024		Soil	B24-Jn0023051	X		
90	0861_BH536_5.0_240607	Jun 07, 2024		Soil	B24-Jn0023052	X		
91	0861_BH536_6.0_240607	Jun 07, 2024		Soil	B24-Jn0023053	X		
92	0861_BH536_8.0_240607	Jun 07, 2024		Soil	B24-Jn0023054	X		
93	0861_BH536_9.0_240607	Jun 07, 2024		Soil	B24-Jn0023055	X		
94	0861_BH536_10.0_240607	Jun 07, 2024		Soil	B24-Jn0023056	X		
95	0861_QC102_240607	Not Provided		Soil	B24-Jn0023057	X		
Test Counts						67	22	28

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	75			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	145			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	100			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	117			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	127			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	124			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	70			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	84			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	117			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	138			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	141			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	130			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	125			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	87			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	128			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	58			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	134			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	100			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	93			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	134			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	70			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	96			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanesulfonic acid (PFHxS)	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	141			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	143			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	142			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	63			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	140			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	134			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	72			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	90			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	93			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	95			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	93			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	72			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	55			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	51			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	81			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	127			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	77			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	55			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	119			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	59			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	72			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	145			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	82			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	112			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	91			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	77			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	59			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	74			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	70			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	72			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	104			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	71			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	58			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	69			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	94			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	B24-Jn0022985	CP	%	81			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022985	CP	%	145			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022985	CP	%	93			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022985	CP	%	113			50-150	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022985	CP	%	111			50-150	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022985	CP	%	116			50-150	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022985	CP	%	70			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022985	CP	%	99			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022985	CP	%	125			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022985	CP	%	119			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022985	CP	%	140			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022985	CP	%	86			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022985	CP	%	132			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022985	CP	%	85			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022985	CP	%	123			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022985	CP	%	74			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022985	CP	%	135			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022985	CP	%	111			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022985	CP	%	106			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022985	CP	%	124			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022985	CP	%	88			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022985	CP	%	110			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022985	CP	%	101			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022985	CP	%	136			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B24-Jn0022985	CP	%	109			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022985	CP	%	127			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022985	CP	%	72			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022985	CP	%	106			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022985	CP	%	138			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022985	CP	%	138			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022967	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022967	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022967	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022967	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B24-Jn0022971	CP	%	36	37	1.4	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022972	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022972	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022972	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022972	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022974	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022974	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022974	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022974	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022979	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022979	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B24-Jn0022979	CP	ug/kg	7.3	6.8	7.2	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022979	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022979	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B24-Jn0022982	CP	%	18	18	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised by:

[redacted]

Analytical Services Manager
Senior Analyst-PFAS
Senior Analyst-Sample Properties

Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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[redacted]

NATA Accredited
Accreditation Number 1261
Site Number 20794 & 2780

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: [redacted]

Report **1106398-W**
Project name AMBERLEY
Project ID 60591765
Received Date Jun 07, 2024

Client Sample ID			**0861_QC400_240603**	**0861_QC300_240603**	**0861_QC301_240604**	**0861_QC302_240605**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**B24-Jn0022983**	**B24-Jn0022986**	**B24-Jn0022987**	**B24-Jn0022988**
Date Sampled			**Not Provided**[I12]	**Not Provided**[I12]	**Not Provided**[I12]	**Not Provided**[I12]
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	141	119	122	120
13C5-PFPeA (surr.)	1	%	101	120	89	89
13C5-PFHxA (surr.)	1	%	110	129	99	93
13C4-PFHpA (surr.)	1	%	103	101	86	86
13C8-PFOA (surr.)	1	%	105	110	87	87
13C5-PFNA (surr.)	1	%	105	125	91	89
13C6-PFDA (surr.)	1	%	108	107	95	93
13C2-PFUnDA (surr.)	1	%	99	72	98	88
13C2-PFDoDA (surr.)	1	%	134	67	137	106
13C2-PFTeDA (surr.)	1	%	43	19	62	32
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	84	66	76	81
D3-N-MeFOSA (surr.)	1	%	24	123	60	39

Client Sample ID			0861_QC400_240603	0861_QC300_240603	0861_QC301_240604	0861_QC302_240605
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			B24-Jn0022983	B24-Jn0022986	B24-Jn0022987	B24-Jn0022988
Date Sampled			Not Provided[I12]	Not Provided[I12]	Not Provided[I12]	Not Provided[I12]
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	21	117	71	37
D7-N-MeFOSE (surr.)	1	%	69	162	77	69
D9-N-EtFOSE (surr.)	1	%	48	145	44	49
D5-N-EtFOSAA (surr.)	1	%	93	92	87	78
D3-N-MeFOSAA (surr.)	1	%	83	90	79	73
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	116	112	101	98
18O2-PFHxS (surr.)	1	%	107	99	95	92
13C8-PFOS (surr.)	1	%	108	100	98	90
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	97	122	85	83
13C2-6:2 FTSA (surr.)	1	%	97	96	87	79
13C2-8:2 FTSA (surr.)	1	%	116	84	83	91
13C2-10:2 FTSA (surr.)	1	%	94	79	102	83
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			0861_QC303_240606	0861_QC304_240607
Sample Matrix			Water	Water
Eurofins Sample No.			B24-Jn0022989	B24-Jn0022990
Date Sampled			Not Provided[I12]	Not Provided[I12]
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01

Client Sample ID			0861_QC303_240606	0861_QC304_240607
Sample Matrix			Water	Water
Eurofins Sample No.			B24-Jn0022989	B24-Jn0022990
Date Sampled			Not Provided[I12]	Not Provided[I12]
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	139	160
13C5-PFPeA (surr.)	1	%	105	219
13C5-PFHxA (surr.)	1	%	117	129
13C4-PFHpA (surr.)	1	%	109	121
13C8-PFOA (surr.)	1	%	112	125
13C5-PFNA (surr.)	1	%	113	160
13C6-PFDA (surr.)	1	%	110	133
13C2-PFUnDA (surr.)	1	%	100	94
13C2-PFDoDA (surr.)	1	%	129	96
13C2-PFTeDA (surr.)	1	%	41	27
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	88	73
D3-N-MeFOSA (surr.)	1	%	46	132
D5-N-EtFOSA (surr.)	1	%	45	117
D7-N-MeFOSE (surr.)	1	%	88	152
D9-N-EtFOSE (surr.)	1	%	53	163
D5-N-EtFOSAA (surr.)	1	%	101	104
D3-N-MeFOSAA (surr.)	1	%	88	113
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	125	130
18O2-PFHxS (surr.)	1	%	112	120
13C8-PFOS (surr.)	1	%	114	117

Client Sample ID			0861_QC303_240606	0861_QC304_240607
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**B24-Jn0022989**	**B24-Jn0022990**
Date Sampled			**Not Provided**[I12]	**Not Provided**[I12]
Test/Reference	LOR	Unit		
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	90	213
13C2-6:2 FTSA (surr.)	1	%	109	96
13C2-8:2 FTSA (surr.)	1	%	109	103
13C2-10:2 FTSA (surr.)	1	%	100	103
PFASs Summations				
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jun 17, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jun 17, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jun 17, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jun 17, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	76			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	79			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	95			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	85			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	86			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	97			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	97			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	84			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	136			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	81			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	101			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	87			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	94			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	92			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	87			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	94			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	90			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	102			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	86			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	112			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	112			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	96			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	106			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	98			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	59			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	93			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	B24-Jn0022986	CP	%	102			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022986	CP	%	77			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022986	CP	%	79			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022986	CP	%	89			50-150	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022986	CP	%	88			50-150	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022986	CP	%	91			50-150	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022986	CP	%	101			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022986	CP	%	101			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022986	CP	%	87			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022986	CP	%	174			50-150	Fail	J01
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022986	CP	%	93			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022986	CP	%	105			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022986	CP	%	111			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022986	CP	%	105			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022986	CP	%	107			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022986	CP	%	99			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022986	CP	%	107			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022986	CP	%	87			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022986	CP	%	101			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022986	CP	%	105			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022986	CP	%	97			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022986	CP	%	99			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022986	CP	%	97			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022986	CP	%	108			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B24-Jn0022986	CP	%	107			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022986	CP	%	96			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022986	CP	%	107			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022986	CP	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022986	CP	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022986	CP	%	91			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B24-Jn0022990	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B24-Jn0022990	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

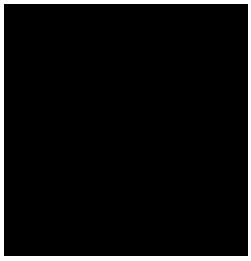
Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
J01	Failures of the Matrix Spike (MS) due to the presence of analytes(s) in parent sample at > 3X the spike concentration.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised by:



Analytical Services Manager

Senior Analyst-PFAS

Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EB2423759**		
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
E-mail	: [redacted]	E-mail	[redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Facsimile	: [redacted]	Facsimile	: [redacted]
Project	: 60612563 3.1	Page	: 1 of 2
Order number	: 60612563 3.1	Quote number	: EP2023AECOMAU0010 (EN/004/23)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: [redacted]		

Dates

Date Samples Received	: 11-Jul-2024 15:50	Issue Date	: 11-Jul-2024
Client Requested Due Date	: 18-Jul-2024	Scheduled Reporting Date	: **18-Jul-2024**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 14.7°C, 13.8°C, 14.°C - Ice present
Receipt Detail	: HARD ESKY	No. of samples received / analysed	: 7 / 7

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
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Unless otherwise stated, analytical work for this work order will be conducted by ALS Brisbane.
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- **Sample " 0861_QC200_240711" has been forwarded to Eurofins , as requested. Please note that this will incur a freight forwarding fee.**
- 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.
- **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.**

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)
EB2423759-001	11-Jul-2024 00:00	0861_MW535_240711	✓
EB2423759-002	11-Jul-2024 00:00	0861_MW536_240711	✓
EB2423759-003	11-Jul-2024 00:00	0861_MW537_240711	✓
EB2423759-004	11-Jul-2024 00:00	0861_MW538_240711	✓
EB2423759-005	11-Jul-2024 00:00	0861_MW539_240711	✓
EB2423759-006	11-Jul-2024 00:00	0861_QC100_240711	✓
EB2423759-007	11-Jul-2024 00:00	0861_QC300_240711	✓

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]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- A4 - AU Tax Invoice (INV) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]
- *AU Certificate of Analysis - NATA (COA) Email
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email
- Chain of Custody (CoC) (COC) Email
- EDI Format - ESDAT (ESDAT) Email

[redacted]

CERTIFICATE OF ANALYSIS

Work Order	: **EB2423759**	Page	: 1 of 7
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1	Date Samples Received	: 11-Jul-2024 15:50
Order number	: 60612563 3.1	Date Analysis Commenced	: 12-Jul-2024
C-O-C number	: ----	Issue Date	: 17-Jul-2024 13:18
Sampler	: [redacted]		
Site	: ----		
Quote number	: EN/004/23		
No. of samples received	: 7		
No. of samples analysed	: 7		

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 - Organics	Brisbane Organics, Stafford, QLD

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.
- Unless otherwise stated, analytical work for this work order will be conducted by ALS Brisbane.
- EP231X PFAS: The high recovery surrogates for sample '0861_QC300_240711' (EB2423759-007) are deemed acceptable as associated results are less than the limit of reporting.
- EP231X PFAS: The LOR of PFOS for sample '0861_MW538_240711' (EB2423759-004) has been raised due to matrix interference.
- 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 tables in USEPA 1633 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: WATER (Matrix: WATER)				Sample ID	0861_MW535_240711	0861_MW536_240711	0861_MW537_240711	0861_MW538_240711	0861_MW539_240711
				Sampling date / time	11-Jul-2024 00:00	11-Jul-2024 00:00	11-Jul-2024 00:00	11-Jul-2024 00:00	11-Jul-2024 00:00
Compound	CAS Number	LOR	Unit		EB2423759-001	EB2423759-002	EB2423759-003	EB2423759-004	EB2423759-005
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	**0.10**	**0.34**	<0.02	**3.73**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		<0.02	**0.10**	**0.19**	<0.02	**2.44**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	**0.62**	**0.26**	**0.05**	**4.26**
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		<0.01	**0.94**	**0.18**	<0.04	<0.01
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	**0.6**
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	**0.20**	**0.12**	<0.02	**0.88**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	**0.24**	**0.38**	<0.02	**3.85**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	**0.07**	**0.03**	<0.02	**0.28**
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	**0.08**	**0.02**	<0.01	**0.04**
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
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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_MW535_240711	0861_MW536_240711	0861_MW537_240711	0861_MW538_240711	0861_MW539_240711
				Sampling date / time	11-Jul-2024 00:00	11-Jul-2024 00:00	11-Jul-2024 00:00	11-Jul-2024 00:00	11-Jul-2024 00:00
Compound	CAS Number	LOR	Unit		EB2423759-001	EB2423759-002	EB2423759-003	EB2423759-004	EB2423759-005
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		<0.01	**2.47**	**1.72**	**0.05**	**16.1**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	**1.56**	**0.44**	**0.05**	**4.26**
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	**2.35**	**1.53**	**0.05**	**13.6**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**92.9**	**95.9**	**109**	**104**	**105**
13C8-PFOA	----	0.02	%		**101**	**103**	**103**	**99.8**	**101**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC100_240711	0861_QC300_240711	----	----	----
				Sampling date / time	11-Jul-2024 00:00	11-Jul-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2423759-006	EB2423759-007	--------	--------	--------
					Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		**3.96**	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L		**2.30**	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		**4.10**	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L		<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	<0.01	----	----	----
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		**0.6**	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		**0.90**	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		**3.87**	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		**0.27**	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		**0.04**	<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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0861_QC100_240711	0861_QC300_240711	----	----	----
				Sampling date / time	11-Jul-2024 00:00	11-Jul-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EB2423759-006	EB2423759-007	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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		**16.0**	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**4.10**	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**13.7**	<0.01	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**97.9**	**196**	----	----	----
13C8-PFOA	----	0.02	%		**105**	**196**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	***Low***	***High***
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

QUALITY CONTROL REPORT

Work Order	: **EB2423759**	Page	: 1 of 4
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Contact	: [redacted]
Address	: [redacted]	Address	[redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1	Date Samples Received	: 11-Jul-2024
Order number	: 60612563 3.1	Date Analysis Commenced	: 12-Jul-2024
C-O-C number	: ----	Issue Date	: 17-Jul-2024
Sampler	: [redacted]		
Site	: ----		
Quote number	: EN/004/23		
No. of samples received	: 7		
No. of samples analysed	: 7		

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 - Organics	Brisbane Organics, Stafford, QLD

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 5924066)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	95.1	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	97.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	97.7	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	102	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	101	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 5924066)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.2	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.2	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	80.6	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	95.4	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	93.2	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	84.6	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	84.0	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	78.8	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	89.4	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 5924066)								
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	88.8	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	92.1	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	93.0	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	92.9	62.6	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	87.8	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: 5924066)								

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	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 5924066) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	100	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	103	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.24 µg/L	110	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	112	64.2	133

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	: **EB2423759**	Page	: 1 of 5
Client	: **AECOM AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: [redacted]	Telephone	: [redacted]
Project	: 60612563 3.1	Date Samples Received	: 11-Jul-2024
Site	: ----	Issue Date	: 17-Jul-2024
Sampler	: [redacted]	No. of samples received	: 7
Order number	: 60612563 3.1	No. of samples analysed	: 7

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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

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.**

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP231S: PFAS Surrogate	EB2423759-007	0861_QC300_240711	**13C4-PFOS**	----	196 %	65.0-140 %	**Recovery greater than upper data quality objective**
EP231S: PFAS Surrogate	EB2423759-007	0861_QC300_240711	**13C8-PFOA**	----	196 %	71.0-133 %	**Recovery greater than upper data quality objective**

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	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	18	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 / *Container* / Client Sample ID(s)		*Sample Date*	*Extraction / Preparation*			*Analysis*		
			Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW535_240711,	0861_MW536_240711,	**11-Jul-2024**	**15-Jul-2024**	07-Jan-2025	✓	**15-Jul-2024**	07-Jan-2025	✓
0861_MW537_240711,	0861_MW538_240711,							
0861_MW539_240711,	0861_QC100_240711,							
0861_QC300_240711								
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
0861_MW535_240711,	0861_MW536_240711,	**11-Jul-2024**	**15-Jul-2024**	07-Jan-2025	✓	**15-Jul-2024**	07-Jan-2025	✓
0861_MW537_240711,	0861_MW538_240711,							
0861_MW539_240711,	0861_QC100_240711,							
0861_QC300_240711								

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
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X)							
0861_MW535_240711, 0861_MW536_240711, 0861_MW537_240711, 0861_MW538_240711, 0861_MW539_240711, 0861_QC100_240711, 0861_QC300_240711	**11-Jul-2024**	**15-Jul-2024**	07-Jan-2025	✓	**15-Jul-2024**	07-Jan-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
0861_MW535_240711, 0861_MW536_240711, 0861_MW537_240711, 0861_MW538_240711, 0861_MW539_240711, 0861_QC100_240711, 0861_QC300_240711	**11-Jul-2024**	**15-Jul-2024**	07-Jan-2025	✓	**15-Jul-2024**	07-Jan-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
0861_MW535_240711, 0861_MW536_240711, 0861_MW537_240711, 0861_MW538_240711, 0861_MW539_240711, 0861_QC100_240711, 0861_QC300_240711	**11-Jul-2024**	**15-Jul-2024**	07-Jan-2025	✓	**15-Jul-2024**	07-Jan-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	18	**0.00**	**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	0	18	**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 LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. 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 and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

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.

DRAFT

Appendix K

Analytical Data Validation

DATA VALIDATION REPORT

Project No.:	60612563	**Validation by:** NK	**Date:** 17/07/2024
Client:	Department of Defence		
Site:	RAAF Base, Amberley		
Matrix type:	Soil and groundwater	**Data verified by:** JP	**Date:** 18/07/2024
No. of primary samples:	16 soil 5 groundwater		
Laboratory:	Eurofins (Brisbane), ALS (Brisbane)	**Project Manager:** JP	
Lab reference:	1106398, EB2420087, EB2423759		

Key Issues:	No key QA/QC issues were identified in the field or laboratory datasets that could have a material implication on data interpretation and therefore decision-making on the project. The data are considered appropriate for use to meet the project objectives.

Field QA/QC

Sampling personnel	Soil sampling was conducted by an AECOM environmental scientist between 03 and 07 June 2024. Water sampling was conducted on 11 July 2024.
Sampling Methodology	Soil samples were collected using appropriate methods as identified within the main body of the report and as presented in the SAQP. Samples were collected from hand auger or the push tube liners or solid flight augers during drilling. Groundwater sampling was conducted using an appropriate method (HydraSleeve).
Chain of Custody	COC documents were completed as per AECOM procedures.
Rinsate Blank	Soil investigation: rinsate blank samples were collected at a frequency of one per day of sampling where appropriate (five in total) during the monitoring between 03 and 07 June 2024. Rinsate blank samples were collected from the decontaminated drilling equipment. Water sampling: one rinsate blank sample was collected during the sampling on 11 July 2024. The rinsate blank sample was collected from the decontaminated interface probe. Results are presented in **Table C1**. PFAS concentrations were not detected above the LOR in any of the samples tested.
Field Blanks	One field blank sample was present during the soil sampling on the first day. All concentrations were reported below the LOR, see **Table C1**.
Frequency of field QC	Field duplicate (inter-laboratory duplicates) and triplicates (inter-laboratory duplicates) were collected (see **Tables C2**). There were two duplicates/triplicate sets for the soil samples and one set for the water sampling. The triplicate water sample was lost during the transport of the sample from ALS to Eurofins. The frequency of field QC exceeded the required 10% for soil samples and duplicate water samples, however, due to the loss of the triplicate water sample, the frequency of QC samples for triplicate samples was not met.
Handling and preservation	Primary, duplicate and triplicate samples were received preserved and chilled at the laboratory. The temperature of the water sample batch on EB2423759 was between 13.8 and 14.7 ºC with ice present. Due to the short transport time to the laboratory,

	there was insufficient time to cool the samples in the esky. All samples were received at the laboratory in appropriate sample containers with no sample container non-compliances noted.
Laboratory QA/QC	
Tests requested/reported	Samples were analysed and reported as requested on the COC.
Holding time compliance	Samples were extracted and analysed within recommended holding times.
Laboratory Accreditation	The laboratory analysis was conducted by Eurofins (Brisbane) and ALS (Brisbane). Both laboratories are National Association of Testing Authorities (NATA) accredited laboratory.
Frequency of laboratory QC	The laboratory reported a sufficient frequency of quality control samples to assess whether the results have been reported to an acceptable accuracy and precision with the exception of: • EB2423759 where laboratory duplicates and matrix spikes did not meet the expected rate (18 samples in the batch).
Method Blank	No method blank non-conformances were reported.
Laboratory duplicate RPDs	No laboratory duplicate non-conformances were reported.
Laboratory control spike recovery	All Laboratory Control Spikes recoveries were within control limits.
Matrix spike recovery	All matrix spike (MS) recoveries (where reported) were within control limits, except: • EB2420087: MS recovery for 10:2 FTS for an anonymous sample was not determined as the background level was greater than the upper data quality objective. • 1106398-W. MS recovery for PFTrDA on B24-Jn0022986 (174%) exceeded the acceptable limits (50-150%). This was identified by the laboratory as being due to the presence of the analyte in the parent sample at three times the spike concentration.
Surrogate spike recovery	Surrogate spike recoveries were within control limits for all samples with the exception of sample 0861_QC300_240711 where 13C4-PFOS and 13C8 PFOA recoveries were greater than the upper data quality objective. The laboratory reported that the high recovery surrogates for this sample are deemed acceptable as the results are less than the limit of reporting.
QA/QC Data Evaluation	
Comparison of Field Observations and Laboratory Results	No anomalous results between field observations and analysis results were noted.
Data transcription	A random 10% check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and tables generated by AECOM.
Limits of reporting	LORs were sufficiently low to enable assessment against adopted screening levels. LORs in the sample 0861_MW201_240606 (EB2420087-002) were raised due to matrix interference. The LOR of PFOS for sample 0861_MW538_240711 was raised due to matrix interference.
Field QA/QC RPDs	RPDs are reported in **Tables C2.** Field duplicate and triplicate RPDs were reported within control limits for all samples.

Other	
Other observations	No other key observations were identified in the field or laboratory datasets that could have a material implication on data interpretation and therefore decision-making on the project.

Table C1 Field Blank and Rinsate Blank Analytical Results

Lab Report	1106398-W	1106398-W	1106398-W	1106398-W	1106398-W	1106398-W	EB2423759
Field ID	0861_QC400_240603	0861_QC300_240603	0861_QC301_240604	0861_QC302_240605	0861_QC303_240606	0861_QC304_240607	0861_QC300_240711
Sampled Date	3/06/2024	3/06/2024	4/06/2024	5/06/2024	6/06/2024	7/06/2024	11/07/2024
Sample Type	Field_B	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate

Analyte	Units	EQL							
PFBS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PFPeS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFHxS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFHpS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFDS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFBA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFPeA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFHxA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFHpA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFOA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFNA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFDA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFUnDA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFDoDA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFTrDA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFTeDA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
FOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MeFOSE	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EtFOSE	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MeFOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EtFOSA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MFOSAA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
EtFOSAA	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FtS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 FTS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10:2 FTS	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Table C2 Soil Duplicate and Triplicate Analytical Results

Lab Report Number	1106398-S	1106398-S		EB240087		1106398-S	1106398-S		EB240087		
Field ID	0861_BH538_0.2_240605	0861_QC100_240605	RPD	0861_QC200_240605	RPD	0861_BH535_0.5_240606	0861_QC101_240606	RPD	0861_QC201_240606	RPD	
Date	05 Jun 2024	05 Jun 2024		05 Jun 2024		06 Jun 2024	06 Jun 2024		06 Jun 2024		
Sample Type	Normal	Field_D		Interlab_D		Normal	Field_D		Interlab_D		
Chemical Name	**Unit**	**EQL**									
PFBS	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	0.9	0
PFPeS	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	0.8	0
PFHxS	µg/kg	5	<5	<5	0	0.2	0	6.5	6	8	7.7	17
PFHpS	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	0.2	0
PFOS	µg/kg	5	<5	<5	0	1.1	0	6.4	8.5	28	6.7	5
PFDS	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFBA	µg/kg	5	<5	<5	0	<1	0	<5	<5	0	<1	0
PFPeA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFHxA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFHpA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFOA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFNA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFDA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFUnDA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFDoDA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFTrDA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
PFTeDA	µg/kg	5	<5	<5	0	<0.05	0	<5	<5	0	<0.05	0
FOSA	µg/kg	5	<5	<5	0	<0.2	0	<5	<5	0	<0.2	0
MeFOSE	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0
EtFOSE	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0
MeFOSA	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0
EtFOSA	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0
MFOSAA	µg/kg	10	<10	<10	0	<0.2	0	<10	<10	0	<0.2	0
EtFOSAA	µg/kg	10	<10	<10	0	<0.2	0	<10	<10	0	<0.2	0
4:2 FTS	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0
6:2 FtS	µg/kg	10	<10	<10	0	<0.5	0	<10	<10	0	<0.5	0
8:2 FTS	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0
10:2 FTS	µg/kg	5	<5	<5	0	<0.5	0	<5	<5	0	<0.5	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.

**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR)
)

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table C3 Water Duplicate Analytical Results

Lab Report Number	EB2423759005	EB2423759006	RPD
Field ID	0861_MW539_240711	0861_QC100_240711	
Date	11 Jul 2024	11 Jul 2024	
Sample Type	Normal	Field_D	

Chemical Name	Unit	EQL			
PFBS	µg/L	0.02	3.73	3.96	6
PFPeS	µg/L	0.02	2.44	2.3	6
PFHxS	µg/L	0.01	4.26	4.1	4
PFHpS	µg/L	0.02	*<0.02*	*<0.02*	0
PFOS	µg/L	0.01	*<0.01*	*<0.01*	0
PFDS	µg/L	0.02	*<0.02*	*<0.02*	0
PFBA	µg/L	0.1	0.6	0.6	0
PFPeA	µg/L	0.02	0.88	0.9	2
PFHxA	µg/L	0.02	3.85	3.87	1
PFHpA	µg/L	0.02	0.28	0.27	4
PFOA	µg/L	0.01	0.04	0.04	0
PFNA	µg/L	0.02	*<0.02*	*<0.02*	0
PFDA	µg/L	0.02	*<0.02*	*<0.02*	0
PFUnDA	µg/L	0.02	*<0.02*	*<0.02*	0
PFDoDA	µg/L	0.02	*<0.02*	*<0.02*	0
PFTrDA	µg/L	0.02	*<0.02*	*<0.02*	0
PFTeDA	µg/L	0.05	*<0.05*	*<0.05*	0
FOSA	µg/L	0.02	*<0.02*	*<0.02*	0
MeFOSE	µg/L	0.05	*<0.05*	*<0.05*	0
EtFOSE	µg/L	0.05	*<0.05*	*<0.05*	0
MeFOSA	µg/L	0.05	*<0.05*	*<0.05*	0
EtFOSA	µg/L	0.05	*<0.05*	*<0.05*	0
MFOSAA	µg/L	0.02	*<0.02*	*<0.02*	0
EtFOSAA	µg/L	0.02	*<0.02*	*<0.02*	0
4:2 FTS	µg/L	0.05	*<0.05*	*<0.05*	0
6:2 FtS	µg/L	0.05	*<0.05*	*<0.05*	0
8:2 FTS	µg/L	0.05	*<0.05*	*<0.05*	0
10:2 FTS	µg/L	0.05	*<0.05*	*<0.05*	0

*RPDs have only been considered where a concentration is greater than 1 times the LOR.
**High RPDs are in bold (Acceptable RPDs for each LOR multiplier range are: 200 (1-10 x LOR); 50 (10-20 x LOR); 30 (> 20 x LOR))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Appendix D Infrastructure Project Summary

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Project	Works Dates	Location	Approx. volume of soil disturbed	Other comments
EST00736 Hangar 410 fire system repair/upgrade works	Mid 2019 to Oct 2020	Hangar 410	6000 m^3	Majority of earth works were completed in 2019 and were associated with the construction of a collection tank for wastewater from the fire suppression system.
EST03312 MWD works package	Aug 19 - Aug 20	Military Working Dog Kennel precinct, AP-2	100 m^3	Douglas Partners, Oct 2018, Report on Pre-construction Contamination Assessment Military Working Dog Works.
EST03306 EO Area Building Works	Dec 19 - Apr 20	EO precinct	3 m^3	Disturbed soil re-used on-Base.
EST01170 RAAFSFS Fire School Works	From end 2019 ongoing	Fire Training School AP-2	1100 m^3	Works include the upgrade of the fire training system, including road infrastructure, trenching and refurbishment of the holding ponds. Including soil, asphalt and concrete
EST03313 AP1-1 Building refurbishment	Jan - Nov 20	Property 1, Frog's Hollow	250 m^3	Douglas Partners, Feb 2019, Report on Pre-construction Contamination Assessment Amberley ADFIS.
LAND121 AdBlue facility works	Apr-Oct 2020	Base Vehicle Fuel Point	Unknown	Lendlease, LAND 121 Stage 2A Unite Sustainment Facilities, RAAF Base Amberley, Contamination Management Sub Plan, 11 March 2020.
25m Range works EST03293	Mar to Jul 2020	25 metre range	Unknown	Topsoil stripped and re-used, some earth disturbance for footings, contaminated sand from the bullet catcher removed.
Battlefield Airlifter project	2015 to 2022	Multiple sites	5,000 m^3	Laing O'Rourke is contractor. Multiple projects including evaporation ponds and fire main works.
Canberra bomber shelter works	May 2020	Old Front Gate	Minor	
EST5909 DFI Operations and EST05334 9FSB works initial Base contamination investigation	Jul 2020	9FSB and adjacent to DFI	Unknown	Report, Aurecon, 27 July 2020, EST05334 RAAF Amberley 9RSG Workshop Pre-Construction Contamination Assessment
EST06218 HQ CSG compound	Jul to Aug 2020	Near BLD 901	Unknown	Investigation completed by Douglas Partners.
EST04769 EOD storage works	Started 2020	Compounds 470 and 633	1,023 m^3	Aurecon, 2 December 2019, Amberley Ordnance Storage Works - waste classification of soils.
EST06218 HQ CSG compound site investigation	Started 2020	Near BLD 901	200 m^3	Technical Memorandum, Golder to St Hilliers, Proposed Movement of Soil on-base at RAAF Amberley, 9 Oct 2020.
EST04138 Defence Fuel Transformation Program Risk Reduction Works	Oct 20 to Mar 21	FF2	20 m^3	Sampling will occur during works. Soil disturbance is associated with excavation of a slab for new tank footings.
6ESR Replacing Gravel driveway with concrete within unit lines	Oct - Dec 20	6ESR	< 10 m^3	Material re-used on-Base.
P1005 NAPMP Pavement Maintenance Works	2021 – 2022	Airfield	Unknown	Pavement repairs etc. PMCA was Aurecon. Contractor was Fulton Hogan.
P1005 NAPMP Apron Reconstruction Hangar 832	2021 - 2022	Hangar 832	>4,000m^3	Refer Epic Environmental Material Classification BLD 832 Apron, 18 Dec 2020.
EST03298 Base Roads upgrade	2021	Roads	Unknown	Cardno, 4 June 2020, EST03298 Amberley Base Roads Maintenance, Soil Characterisation Report.
Construction of new STP	Q2 2023- 2024	STP	Unknown	PMCA is Jacobs, contractor is St Hilliers. Major facility upgrade.
P10 Runway upgrade	2022 ongoing	Airfield	Unknown	Fulton Hogan is contractor. Location for asphalt batching plant is being selected. Beneficial reuse of asphalt for perimeter tracks.
EST5349PH6 Growler	2022 ongoing	Various	Unknown	PMCA is Jacobs. Construction of offices. Design phase complete, site selection in process. One site environmentally sensitive area identified (Koalas). Report in process.

Project	Works Dates	Location	Approx. volume of soil disturbed	Other comments
DFI office works	2022-2023	Next to DFI	Unknown	Habitat clearance and excavation. PMCA Aurecon. Contractor is Apollo.
Air traffic control project	2015 ongoing	Airfield	Unknown	Location of new build has required removal of thousands of trees around the old air traffic control tower and significant excavation.
Northern perimeter fence around airfield	2022- 2023	Northern airfield	Unknown- small volume	Security fence being erected with 300-450 plinths with 600-1000mm deep postholes. Low volume of soil excavated and battered against fence.

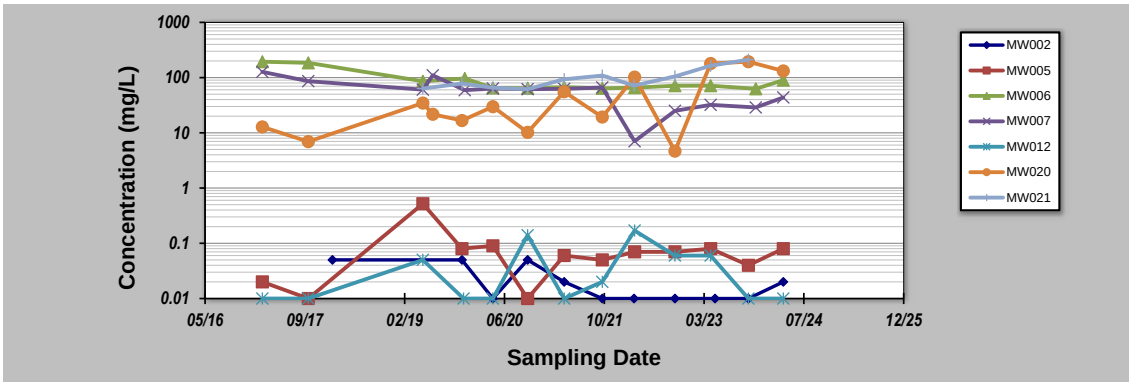
Appendix E Trend Assessment

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:		MW002	MW005	MW006	MW007	MW012	MW020	MW021
Sampling Event	Sampling Date							
1	21-Feb-17		0.02	194	127	0.01	12.8	
2	1-Mar-17							
3	9-Oct-17		0.01	185	86.2	0.01	6.93	
4	15-Jan-18							
5	5-Feb-18							
6	7-Feb-18	0.05						
7	9-Mar-18							
8	5-Apr-18							
9	30-Apr-19							
10	1-May-19							
11	6-May-19		0.52	86	60.6	0.05	34.6	63.4
12	25-Jun-19				110.22		21.68	
13	18-Nov-19	0.05	0.08				16.7	78.2
14	26-Nov-19					0.01		
15	2-Dec-19			96.5	59.2			
16	21-Apr-20	0.01	0.09	65	63.5	0.01	29.7	65.7
17	12-Oct-20	0.05	0.01	64.3	61.8	0.14	10.2	61.8
18	13-Apr-21	0.02	0.06	67.3	62.6	0.01	55.4	93.4
19	21-Oct-21	0.01	0.05	64	66.3	0.02	19.3	109
20	26-Nov-21							
21	29-Mar-22	0.01						71.9
22	1-Apr-22		0.07	65.8	7.04	0.17	102	
23	20-Oct-22	0.01	0.07	71.3	25	0.06	4.66	105
24	9-Nov-22							
25	17-Apr-23		0.08	71.4	32.1	0.06	180	164
26	9-May-23	0.01						
27	10-Aug-23							
28	23-Oct-23	0.01	0.04			0.01	194	211
29	29-Nov-23			62.6	28.8			
30	15-Apr-24	0.02	0.08	89.9	43.7	0.01	132	
31	3-May-24							
32	11-Jul-24							
33								
34								
35								
Coefficient of Variation:		0.79	1.45	0.50	0.55	1.22	1.13	0.48
Mann-Kendall Statistic (S):		-20	9	-26	-45	12	39	29
Confidence Factor:		92.9%	68.4%	93.6%	99.3%	74.5%	98.2%	99.5%
Concentration Trend:		Prob. Decreasing	No Trend	Prob. Decreasing	Decreasing	No Trend	Increasing	Increasing



Notes:

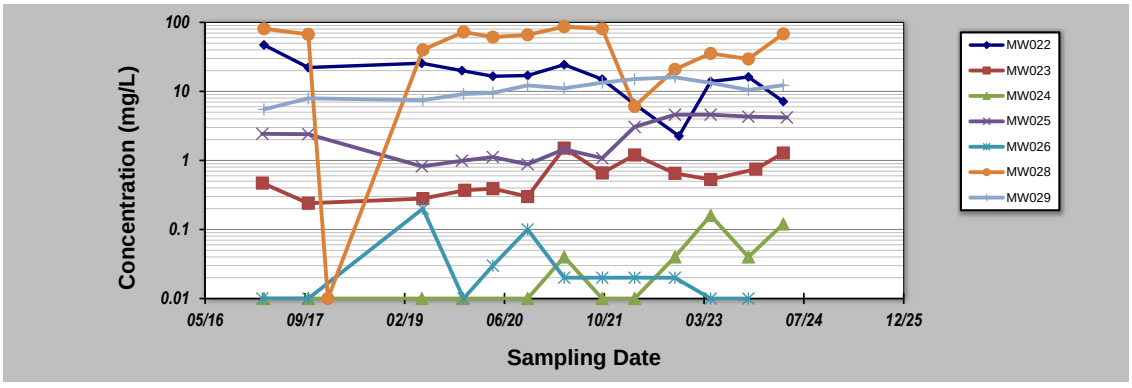
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	MW022	MW023	MW024	MW025	MW026	MW028	MW029
Sampling Event	Sampling Date							
1	21-Feb-17		0.47		2.43	0.01		
2	1-Mar-17	47.1		0.01			80.9	5.49
3	9-Oct-17	22.2	0.24	0.01	2.4	0.01	67.1	7.94
4	15-Jan-18						0.01	
5	5-Feb-18							
6	7-Feb-18							
7	9-Mar-18							
8	5-Apr-18							
9	30-Apr-19	25.6						
10	1-May-19			0.01	0.82			
11	6-May-19		0.28			0.2	40	7.45
12	25-Jun-19							
13	18-Nov-19	20		0.01	0.99			
14	26-Nov-19					0.01	72.7	9.17
15	2-Dec-19		0.37					
16	21-Apr-20	16.6	0.39		1.12	0.03	61.1	9.54
17	12-Oct-20	17	0.3	0.01	0.88	0.1	66	12.2
18	13-Apr-21	24.4	1.51	0.04	1.45	0.02	86.7	11.1
19	21-Oct-21	15	0.66	0.01	1.08	0.02	80.5	13.4
20	26-Nov-21							
21	29-Mar-22	6.62						
22	1-Apr-22		1.2	0.01	3.06	0.02	6.06	15.1
23	20-Oct-22		0.65	0.04	4.59	0.02	20.9	16
24	9-Nov-22	2.26						
25	17-Apr-23	13.9	0.53	0.16	4.6	0.01	35.5	13.3
26	9-May-23							
27	10-Aug-23							
28	23-Oct-23	16.2		0.04	4.31	0.01	29.5	10.5
29	29-Nov-23		0.75					
30	15-Apr-24	7.15	1.28	0.12			68.1	12.3
31	3-May-24				4.19			
32	11-Jul-24							
33								
34								
35								
Coefficient of Variation:		0.62	0.63	1.27	0.62	1.48	0.56	0.28
Mann-Kendall Statistic (S):		-50	40	34	34	-8	-11	48
Confidence Factor:		99.9%	99.3%	99.0%	97.9%	68.1%	70.5%	99.9%
Concentration Trend:		Decreasing	Increasing	Increasing	Increasing	No Trend	Stable	Increasing



Notes:

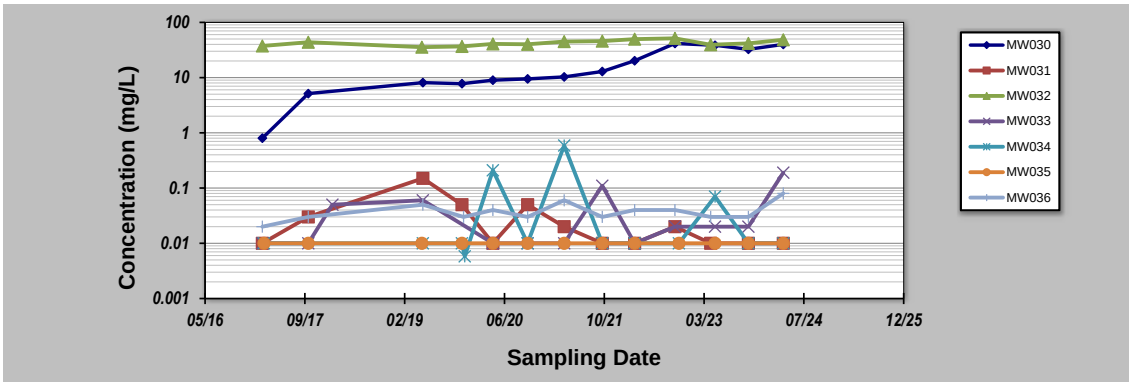
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:		MW030	MW031	MW032	MW033	MW034	MW035	MW036
Sampling Event	Sampling Date							
1	21-Feb-17	0.8	0.01	37.4	0.01			0.02
2	1-Mar-17					0.01	0.01	
3	9-Oct-17	5.13	0.03	43.7	0.01		0.01	0.03
4	15-Jan-18							
5	5-Feb-18							
6	7-Feb-18				0.05			
7	9-Mar-18							
8	5-Apr-18							
9	30-Apr-19							
10	1-May-19			35.6			0.01	
11	6-May-19	8.11	0.15		0.06	0.01		0.05
12	25-Jun-19							
13	18-Nov-19	7.76	0.05	36.7		0.01	0.01	
14	26-Nov-19							0.03
15	2-Dec-19					0.0058		
16	21-Apr-20	8.98	0.01	40.8	0.01	0.21	0.01	0.04
17	12-Oct-20	9.48	0.05	40.1	0.01	0.01	0.01	0.03
18	13-Apr-21	10.3	0.02	44.9	0.01	0.59	0.01	0.06
19	21-Oct-21	12.9	0.01	45.8	0.11	0.01	0.01	0.03
20	26-Nov-21							
21	29-Mar-22							
22	1-Apr-22	20.2	0.01	49.7	0.01	0.01	0.01	0.04
23	20-Oct-22	41.5	0.02	51.4	0.02			0.04
24	9-Nov-22					0.01	0.01	
25	17-Apr-23		0.01	39.3				0.03
26	9-May-23	38.5			0.02	0.07	0.01	
27	10-Aug-23							
28	23-Oct-23	32.5	0.01	41.7	0.02	0.01	0.01	0.03
29	29-Nov-23							
30	15-Apr-24	39.9	0.01	48.4	0.19	0.01	0.01	0.08
31	3-May-24							
32	11-Jul-24							
33								
34								
35								
Coefficient of Variation:		0.81	1.30	0.12	1.32	2.22	0.00	0.41
Mann-Kendall Statistic (S):		68	-27	36	24	6	0	18
Confidence Factor:		>99.9%	94.3%	98.5%	91.8%	61.7%	47.6%	84.7%
Concentration Trend:		Increasing	Prob. Decreasing	Increasing	Prob. Increasing	No Trend	Stable	No Trend



Notes:

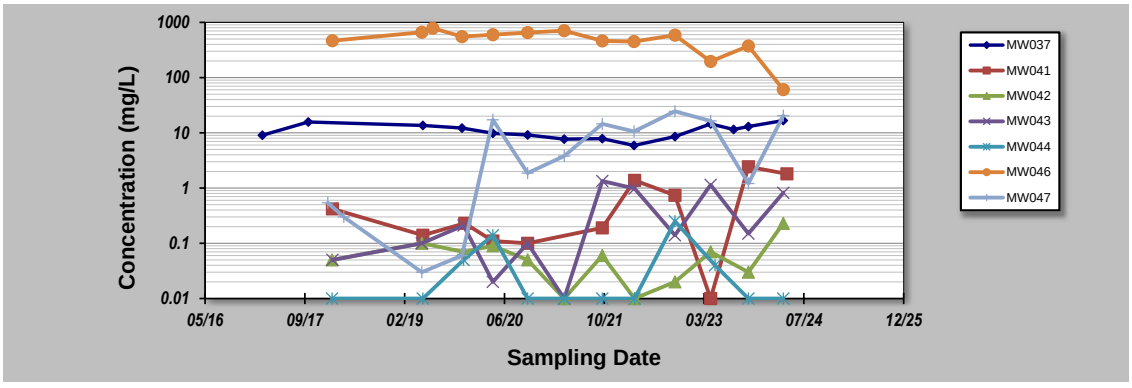
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-2024	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	MW037	MW041	MW042	MW043	MW044	MW046	MW047
Sampling Event	Sampling Date							
1	21-Feb-17	9.05						
2	1-Mar-17							
3	9-Oct-17	15.7						
4	15-Jan-18							0.54
5	5-Feb-18			0.05		0.01		
6	7-Feb-18		0.42		0.05		465	
7	9-Mar-18							
8	5-Apr-18							0.3
9	30-Apr-19							
10	1-May-19			0.1	0.1		663	0.03
11	6-May-19	13.6	0.14			0.01		
12	25-Jun-19						784.48	
13	18-Nov-19	12.2					551	0.06
14	26-Nov-19			0.07	0.21	0.05		
15	2-Dec-19		0.23					
16	21-Apr-20	9.84	0.11	0.09	0.02	0.14	597	17.2
17	12-Oct-20	9.15	0.1	0.05	0.1	0.01	654	1.87
18	13-Apr-21	7.7		0.01	0.01	0.01	707	3.8
19	21-Oct-21	7.85	0.19	0.06	1.34	0.01	462	14.5
20	26-Nov-21							
21	29-Mar-22	5.91					450	10.6
22	1-Apr-22		1.38	0.01	0.98	0.01		
23	20-Oct-22	8.56	0.74	0.02	0.14	0.25	587	24.5
24	9-Nov-22							
25	17-Apr-23	14.5	0.01	0.07	1.14		196	16.4
26	9-May-23					0.04		
27	10-Aug-23	11.5						
28	23-Oct-23	13	2.43	0.03	0.15	0.01	373	1.21
29	29-Nov-23							
30	15-Apr-24	16.7		0.23	0.82	0.01	60.6	20.4
31	3-May-24		1.81					
32	11-Jul-24							
33								
34								
35								
Coefficient of Variation:		0.30	1.19	0.90	1.18	1.59	0.41	1.05
Mann-Kendall Statistic (S):		3	13	-5	23	0	-40	38
Confidence Factor:		54.3%	82.1%	60.6%	93.3%	47.3%	99.3%	98.9%
Concentration Trend:		No Trend	No Trend	Stable	Prob. Increasing	No Trend	Decreasing	Increasing



Notes:

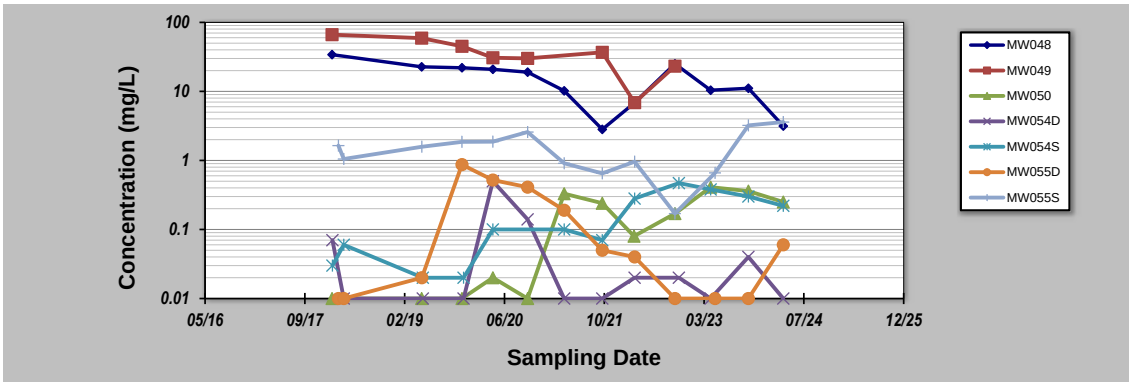
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Event	Sampling Date	MW048	MW049	MW050	MW054D	MW054S	MW055D	MW055S
1	21-Feb-17							
2	1-Mar-17							
3	9-Oct-17							
4	15-Jan-18							
5	5-Feb-18	34.1	66.3	0.01				
6	7-Feb-18				0.07	0.03		
7	9-Mar-18						0.01	1.64
8	5-Apr-18				0.01	0.06	0.01	1.05
9	30-Apr-19	22.7	59.1	0.01				
10	1-May-19						0.02	1.58
11	6-May-19				0.01	0.02		
12	25-Jun-19							
13	18-Nov-19	22	45	0.01			0.87	1.86
14	26-Nov-19				0.01	0.02		
15	2-Dec-19							
16	21-Apr-20	20.9	30.7	0.02	0.5	0.1	0.52	1.87
17	12-Oct-20	19	30.1	0.01	0.14		0.41	2.58
18	13-Apr-21	10.2		0.33	0.01	0.1	0.19	0.91
19	21-Oct-21	2.82	36.8	0.24	0.01	0.07	0.05	0.65
20	26-Nov-21							
21	29-Mar-22	6.73		0.08				
22	1-Apr-22		6.88		0.02	0.28	0.04	0.96
23	20-Oct-22	25.1	23.2	0.17			0.01	0.17
24	9-Nov-22				0.02	0.47		
25	17-Apr-23	10.4		0.41	0.01	0.38		
26	9-May-23						0.01	0.66
27	10-Aug-23							
28	23-Oct-23	11.1		0.36	0.04	0.3	0.01	3.22
29	29-Nov-23							
30	15-Apr-24	3.15		0.25	0.01	0.22	0.06	3.6
31	3-May-24							
32	11-Jul-24							
33								
34								
35								
Coefficient of Variation:		0.62	0.52	0.97	2.05	0.90	1.58	0.65
Mann-Kendall Statistic (S):		-34	-22	40	-4	38	-12	2
Confidence Factor:		99.0%	99.8%	99.7%	57.1%	99.6%	74.5%	52.4%
Concentration Trend:		Decreasing	Decreasing	Increasing	No Trend	Increasing	No Trend	No Trend



Notes:

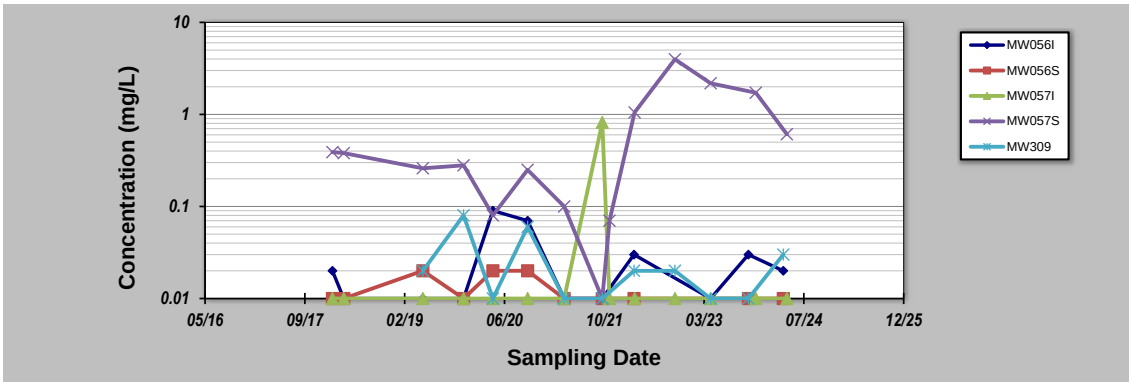
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	MW056I	MW056S	MW057I	MW057S	MW309		
Sampling Event	Sampling Date							
1	21-Feb-17							
2	1-Mar-17							
3	9-Oct-17							
4	15-Jan-18							
5	5-Feb-18							
6	7-Feb-18	0.02	0.01	0.01	0.39			
7	9-Mar-18							
8	5-Apr-18	0.01	0.01	0.01	0.38			
9	30-Apr-19							
10	1-May-19							
11	6-May-19	0.01	0.02	0.01	0.26	0.02		
12	25-Jun-19							
13	18-Nov-19							
14	26-Nov-19	0.01	0.01	0.01	0.28	0.08		
15	2-Dec-19							
16	21-Apr-20	0.09	0.02	0.01	0.08	0.01		
17	12-Oct-20	0.07	0.02	0.01	0.25	0.06		
18	13-Apr-21	0.01	0.01	0.01	0.1	0.01		
19	21-Oct-21	0.01	0.01	0.82	0.01	0.01		
20	26-Nov-21			0.01	0.07			
21	29-Mar-22	0.03	0.01			0.02		
22	1-Apr-22			0.01	1.05			
23	20-Oct-22			0.01	3.97	0.02		
24	9-Nov-22							
25	17-Apr-23	0.01		0.01	2.18	0.01		
26	9-May-23							
27	10-Aug-23							
28	23-Oct-23	0.03	0.01			0.01		
29	29-Nov-23			0.01	1.72			
30	15-Apr-24	0.02	0.01			0.03		
31	3-May-24			0.01	0.61			
32	11-Jul-24							
33								
34								
35								
Coefficient of Variation:		0.99	0.37	3.19	1.38	0.92		
Mann-Kendall Statistic (S):		5	-8	1	13	-8		
Confidence Factor:		60.6%	70.3%	50.0%	74.1%	70.3%		
Concentration Trend:		No Trend	Stable	No Trend	No Trend	Stable		



Notes:

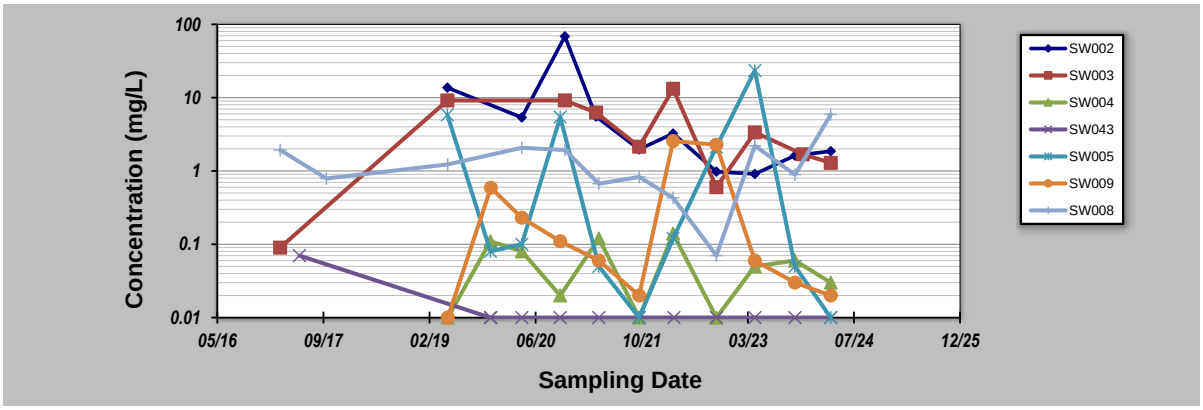
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:		SW002	SW003	SW004	SW043	SW005	SW009	SW008
Sampling Event	Sampling Date							
1	28-Feb-17							
2	2-Mar-17		0.09					1.93
3	1-Jun-17				0.07			
4	13-Sep-17							
5	15-Sep-17							
6	6-Oct-17							0.79
7	18-Jan-18							
8	29-Apr-19	13.7	9.15			5.84		
9	1-May-19			0.01			0.01	1.23
10	18-Nov-19			0.11	0.01	0.08		
11	20-Nov-19				0.01		0.59	
12	3-Dec-19							
13	14-Apr-20	5.37		0.08	0.01	0.1	0.23	2.07
14	12-Oct-20			0.02	0.01	5.44	0.11	
15	3-Nov-20	68.5	9.17					1.93
16	30-Mar-21	5.52	6.26					
17	12-Apr-21			0.12	0.01	0.05	0.06	0.67
18	19-Oct-21	1.97	2.14	0.01	0.01	0.01	0.02	0.83
19	28-Mar-22	3.24	13.2	0.14		0.12	2.56	0.43
20	1-Apr-22				0.01			
21	18-Oct-22	0.98	0.6	0.01	0.01	2.13	2.28	0.07
22	17-Apr-23	0.91	3.36	0.05	0.01	23.4	0.06	2.21
23	9-May-23							
24	10-Aug-23							
25	23-Oct-23	1.62		0.06	0.01	0.05	0.03	0.89
26	29-Nov-23		1.69					
27	9-Apr-24	1.86	1.29	0.03	0.01	0.01	0.02	5.9
28								
29								
30								
Coefficient of Variation:		2.00	0.96	0.82	1.15	2.07	1.74	0.97
Mann-Kendall Statistic (S):		-27	-9	0	-11	-11	-9	1
Confidence Factor:		99.2%	75.8%	45.1%	74.9%	77.7%	72.9%	50.0%
Concentration Trend:		Decreasing	Stable	Stable	No Trend	No Trend	No Trend	No Trend



Notes:

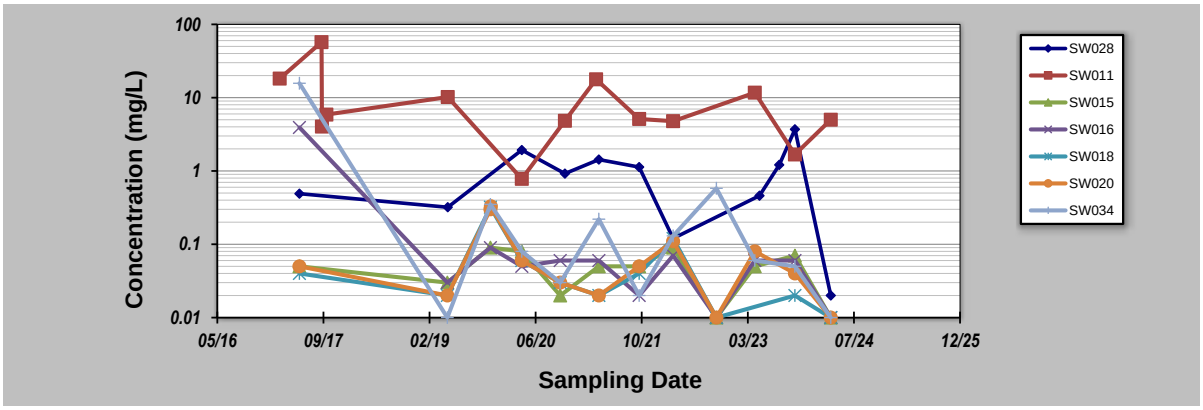
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:		SW028	SW011	SW015	SW016	SW018	SW020	SW034
Sampling Event	Sampling Date							
1	28-Feb-17		18.2					
2	2-Mar-17							
3	1-Jun-17	0.49		0.05	3.92	0.04	0.05	15.7
4	13-Sep-17		57.2					
5	15-Sep-17		4.03					
6	6-Oct-17		5.88					
7	18-Jan-18							
8	29-Apr-19			0.03	0.03	0.02	0.02	0.01
9	1-May-19	0.32	10.2					
10	18-Nov-19			0.09	0.09	0.32	0.3	0.35
11	20-Nov-19						0.33	
12	3-Dec-19							
13	14-Apr-20	1.93	0.78	0.08	0.05	0.06	0.06	0.08
14	12-Oct-20			0.02	0.06	0.03	0.03	0.03
15	3-Nov-20	0.92	4.84					
16	30-Mar-21		17.8					
17	12-Apr-21	1.43		0.05	0.06	0.02	0.02	0.22
18	19-Oct-21	1.13	5.12	0.05	0.02	0.04	0.05	0.02
19	28-Mar-22	0.12	4.78	0.09	0.07	0.12	0.11	0.13
20	1-Apr-22							
21	18-Oct-22			0.01	0.01	0.01	0.01	0.58
22	17-Apr-23		11.7	0.05	0.06		0.08	0.06
23	9-May-23	0.46						
24	10-Aug-23	1.21						
25	23-Oct-23	3.7	1.68	0.07	0.06	0.02	0.04	0.05
26	29-Nov-23							
27	9-Apr-24	0.02	5	0.01	0.01	0.01	0.01	0.01
28								
29								
30								
Coefficient of Variation:		0.99	1.31	0.57	3.02	1.45	1.24	3.13
Mann-Kendall Statistic (S):		-1	-20	-10	-21	-20	-19	-17
Confidence Factor:		50.0%	87.4%	72.7%	91.3%	92.9%	86.1%	86.0%
Concentration Trend:		Stable	No Trend	Stable	Prob. Decreasing	Prob. Decreasing	No Trend	No Trend



Notes:

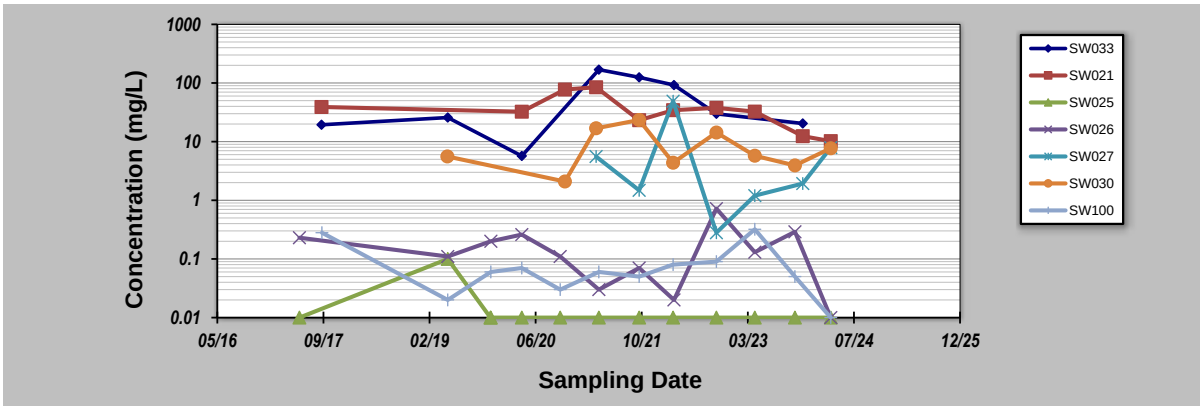
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	SW033	SW021	SW025	SW026	SW027	SW030	SW100
Sampling Event	Sampling Date							
1	28-Feb-17							
2	2-Mar-17							
3	1-Jun-17			0.01	0.23			
4	13-Sep-17	19.4	39					
5	15-Sep-17							0.28
6	6-Oct-17							
7	18-Jan-18							
8	29-Apr-19						5.59	
9	1-May-19	25.8		0.1	0.11			0.02
10	18-Nov-19			0.01				
11	20-Nov-19			0.01	0.2			0.06
12	3-Dec-19							
13	14-Apr-20	5.7	32.4	0.01	0.26			0.07
14	12-Oct-20			0.01	0.11			0.03
15	3-Nov-20		77.4				2.09	
16	30-Mar-21		84.6			5.57	16.9	
17	12-Apr-21	169		0.01	0.03			0.06
18	19-Oct-21	125	23.2	0.01	0.07	1.48	23.4	0.05
19	28-Mar-22		34.4	0.01		48.8	4.37	0.08
20	1-Apr-22	92.3			0.02			
21	18-Oct-22	29.8	37.7	0.01	0.72	0.28	14.3	0.09
22	17-Apr-23		32.5	0.01	0.13	1.2	5.75	0.32
23	9-May-23							
24	10-Aug-23							
25	23-Oct-23			0.01	0.29		3.93	0.05
26	29-Nov-23	20.4	12.4			1.93		
27	9-Apr-24		10.2	0.01	0.01	7.9	7.71	0.01
28								
29								
30								
Coefficient of Variation:		0.99	0.64	1.47	1.07	1.82	0.77	1.07
Mann-Kendall Statistic (S):		2	-21	-10	-11	1	0	0
Confidence Factor:		54.8%	96.4%	70.5%	74.9%	50.0%	46.0%	47.3%
Concentration Trend:		No Trend	Decreasing	No Trend	No Trend	No Trend	Stable	No Trend



Notes:

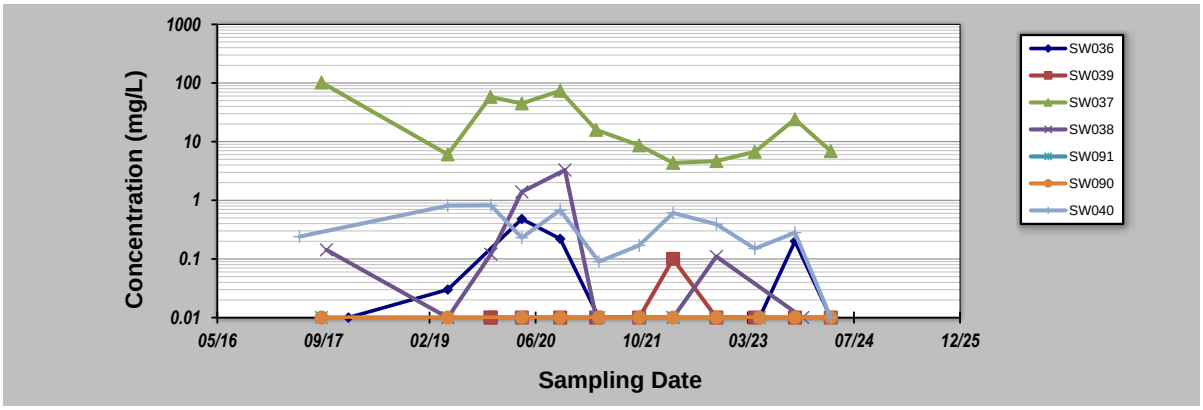
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	SW036	SW039	SW037	SW038	SW091	SW090	SW040
Sampling Event	Sampling Date							
1	28-Feb-17							
2	2-Mar-17							
3	1-Jun-17							0.24
4	13-Sep-17			102		0.01	0.01	
5	15-Sep-17							
6	6-Oct-17				0.143			
7	18-Jan-18	0.01						
8	29-Apr-19							
9	1-May-19	0.03		6.05	0.01		0.01	0.81
10	18-Nov-19		0.01	58.1				
11	20-Nov-19		0.01		0.12			0.82
12	3-Dec-19							
13	14-Apr-20	0.48	0.01	44.8	1.39	0.01	0.01	0.23
14	12-Oct-20	0.22	0.01	73.8			0.01	0.68
15	3-Nov-20				3.28			
16	30-Mar-21		0.01	15.9	0.01			
17	12-Apr-21	0.01				0.01	0.01	0.09
18	19-Oct-21	0.01	0.01	8.65	0.01	0.01	0.01	0.17
19	28-Mar-22		0.1	4.34	0.01	0.01	0.01	0.61
20	1-Apr-22	0.01						
21	18-Oct-22	0.01	0.01	4.66	0.11	0.01	0.01	0.39
22	17-Apr-23		0.01	6.7				0.15
23	9-May-23	0.01				0.01	0.01	
24	10-Aug-23							
25	23-Oct-23	0.2	0.01	24.1			0.01	0.28
26	29-Nov-23				0.01			
27	9-Apr-24	0.01	0.01	6.88		0.01	0.01	0.01
28								
29								
30								
Coefficient of Variation:		1.67	1.49	1.10	2.08	0.00	0.00	0.76
Mann-Kendall Statistic (S):		-10	2	-24	-11	0	0	-26
Confidence Factor:		75.3%	53.0%	94.2%	81.0%	45.2%	45.1%	95.7%
Concentration Trend:		No Trend	No Trend	Prob. Decreasing	No Trend	Stable	Stable	Decreasing



Notes:

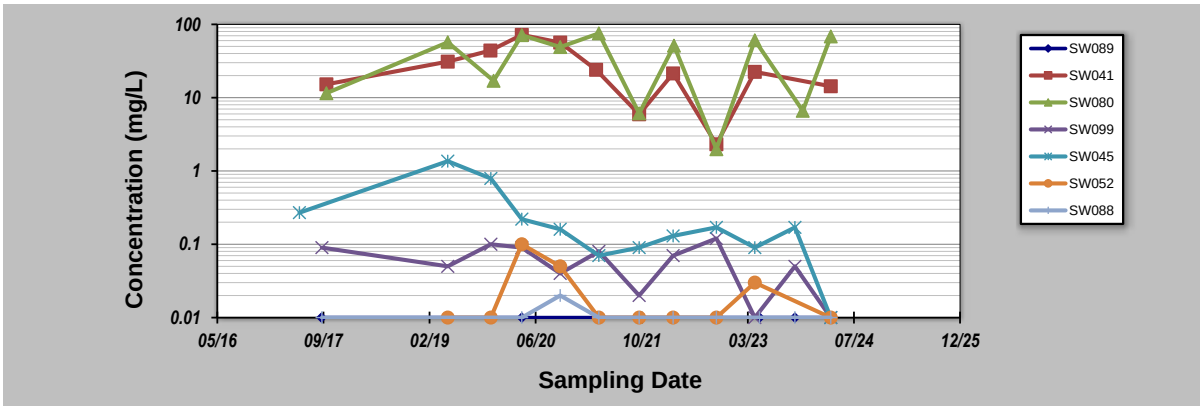
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:		SW089	SW041	SW080	SW099	SW045	SW052	SW088
Sampling Event	Sampling Date							
1	28-Feb-17							
2	2-Mar-17							
3	1-Jun-17					0.27		
4	13-Sep-17	0.01						
5	15-Sep-17				0.09			0.01
6	6-Oct-17		15.2	11.5				
7	18-Jan-18							
8	29-Apr-19							
9	1-May-19	0.01	31	56.9	0.05	1.36	0.01	
10	18-Nov-19		43.9					
11	20-Nov-19				0.1	0.79	0.01	
12	3-Dec-19			17				
13	14-Apr-20	0.01	71.8	71.3	0.09	0.22	0.1	0.01
14	12-Oct-20		56.4	49	0.04	0.16	0.05	0.02
15	3-Nov-20							
16	30-Mar-21		24					
17	12-Apr-21	0.01		75.4	0.08	0.07	0.01	0.01
18	19-Oct-21	0.01	5.93	6.1	0.02	0.09	0.01	0.01
19	28-Mar-22	0.01	21.4		0.07	0.13	0.01	0.01
20	1-Apr-22			51.2				
21	18-Oct-22	0.01	2.31	1.98	0.12	0.17	0.01	0.01
22	17-Apr-23		22.5	60.6	0.01	0.09	0.03	
23	9-May-23	0.01						0.01
24	10-Aug-23							
25	23-Oct-23	0.01			0.05	0.17		0.01
26	29-Nov-23			6.62				
27	9-Apr-24	0.01	14.3	68.4	0.01	0.01	0.01	0.01
28								
29								
30								
Coefficient of Variation:		0.00	0.76	0.72	0.60	1.33	1.18	0.29
Mann-Kendall Statistic (S):		0	-19	2	-25	-34	-4	-5
Confidence Factor:		45.6%	91.8%	52.7%	95.0%	99.0%	60.3%	63.6%
Concentration Trend:		Stable	Prob. Decreasing	No Trend	Prob. Decreasing	Decreasing	No Trend	Stable



Notes:

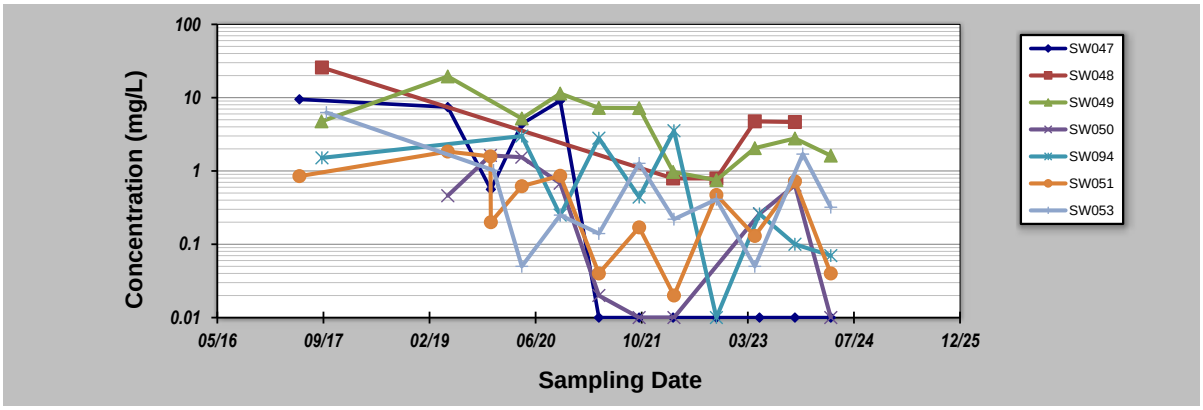
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	SW047	SW048	SW049	SW050	SW094	SW051	SW053
Sampling Event	Sampling Date							
1	28-Feb-17							
2	2-Mar-17							
3	1-Jun-17	9.49					0.85	
4	13-Sep-17			4.75				
5	15-Sep-17		25.8			1.51		
6	6-Oct-17							6.27
7	18-Jan-18							
8	29-Apr-19							
9	1-May-19	7.44		19.5	0.46		1.84	
10	18-Nov-19				1.63		1.58	
11	20-Nov-19	0.56					0.2	
12	3-Dec-19							1.02
13	14-Apr-20	4.38		5.2	1.54	2.99	0.62	0.05
14	12-Oct-20	9.08		11.4	0.68	0.25	0.86	0.25
15	3-Nov-20							
16	30-Mar-21							
17	12-Apr-21	0.01		7.25	0.02	2.8	0.04	0.14
18	19-Oct-21	0.01		7.21	0.01	0.44	0.17	1.27
19	28-Mar-22	0.01	0.79	0.97				
20	1-Apr-22				0.01	3.54	0.02	0.22
21	18-Oct-22	0.01	0.79	0.75		0.01	0.47	0.41
22	17-Apr-23		4.75	2.05			0.13	0.05
23	9-May-23	0.01			0.26	0.26		
24	10-Aug-23							
25	23-Oct-23	0.01	4.65	2.78	0.64	0.1	0.72	
26	29-Nov-23							1.7
27	9-Apr-24	0.01		1.62	0.01	0.07	0.04	0.32
28								
29								
30								
Coefficient of Variation:		1.51	1.43	0.97	1.17	1.17	1.02	1.70
Mann-Kendall Statistic (S):		-37	-1	-25	-20	-19	-35	-4
Confidence Factor:		99.5%	50.0%	97.0%	95.5%	94.6%	98.2%	59.0%
Concentration Trend:		Decreasing	No Trend	Decreasing	Decreasing	Prob. Decreasing	Decreasing	No Trend



Notes:

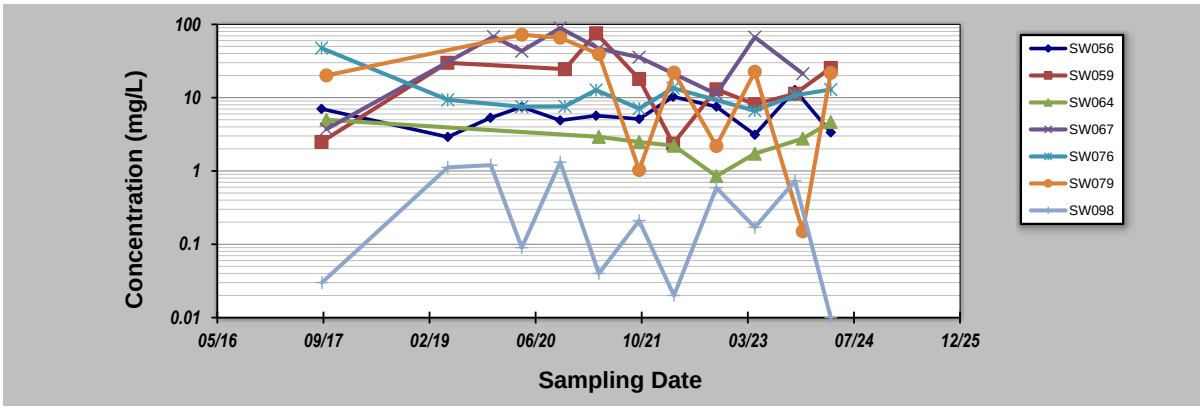
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	-15-Jul-24	Job ID:	66133
Facility Name:	RAAF Base Amberley	Constituent:	Sum PFAS
Conducted By:	MC	Concentration Units:	µg/L

Sampling Point ID:	SW056	SW059	SW064	SW067	SW076	SW079	SW098
Sampling Event	Sampling Date							
1	28-Feb-17							
2	2-Mar-17							
3	1-Jun-17							
4	13-Sep-17	7.03	2.49			47.4		
5	15-Sep-17							0.03
6	6-Oct-17			4.98	3.72		20.1	
7	18-Jan-18							
8	29-Apr-19		29.9					
9	1-May-19	2.91				9.35		1.12
10	18-Nov-19	5.31						
11	20-Nov-19							1.2
12	3-Dec-19				68			
13	14-Apr-20	7.48			43.2	7.51	72.2	0.09
14	12-Oct-20	4.9			88.9		65.8	1.32
15	3-Nov-20		24.5			7.6		
16	30-Mar-21	5.68	75.7			12.7		
17	12-Apr-21			2.92	46.8		39.3	0.04
18	19-Oct-21	5.12	18	2.48	35.6	7.09	1.03	0.21
19	28-Mar-22	10.3	2.36			13.5		
20	1-Apr-22			2.21			22	0.02
21	18-Oct-22	7.55	13	0.85	11.2		2.19	0.59
22	17-Apr-23	3.12	8.12	1.72	66.9	6.65	22.6	0.17
23	9-May-23							
24	10-Aug-23							
25	23-Oct-23	12.7	11.3			10.8		0.73
26	29-Nov-23			2.76	21.2		0.15	
27	9-Apr-24	3.36	25.4	4.64		12.9	21.8	0.01
28								
29								
30								
Coefficient of Variation:		0.47	1.02	0.49	0.66	0.90	0.95	1.11
Mann-Kendall Statistic (S):		8	-5	-6	-4	-3	-17	-10
Confidence Factor:		68.1%	63.6%	72.6%	61.9%	56.9%	92.2%	72.7%
Concentration Trend:		No Trend	No Trend	Stable	Stable	Stable	Prob. Decreasing	No Trend



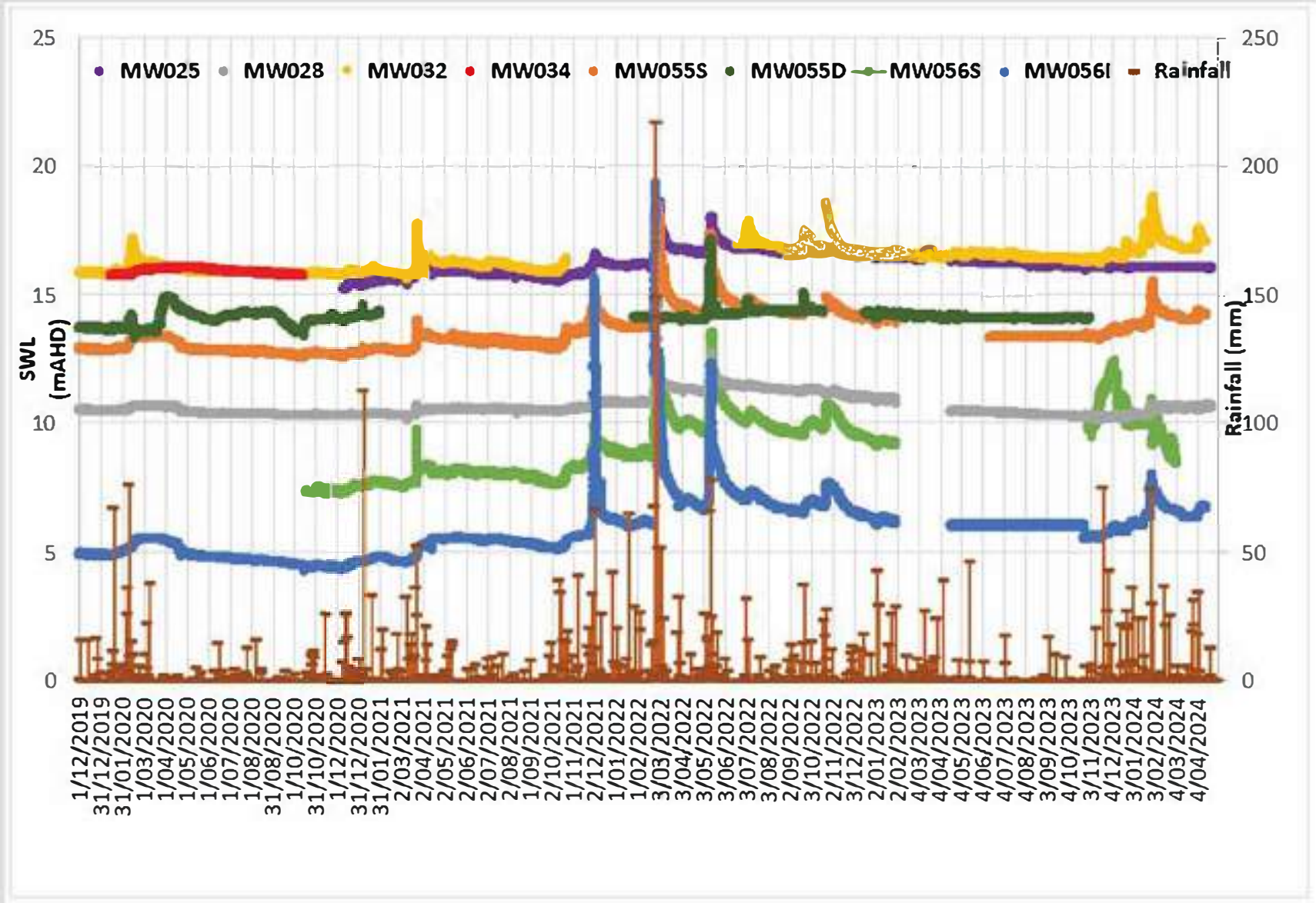
Notes:

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Appendix F Hydrographs

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MW025
MW028
MW032
MW034
MW055S
MW055D
MW056S
MW056I
Rainfall
SWL (mAHD)
Rainfall (mm)
25
20
15
10
5
0
250
200
150
100
50
0
1/12/2019
31/12/2019
31/01/2020
1/03/2020
1/04/2020
1/05/2020
1/06/2020
1/07/2020
1/08/2020
31/08/2020
1/10/2020
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4/03/2024
4/04/2024

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1.1.1.2 Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
A	Mikayla Cover	Kane Mitchell	Kane Mithcell	Draft for comment	09 August 2024
B	Mikayla Cover	Kane Mitchell	Kane Mithcell	Draft for comment	10 October 2024
C	Mikayla Cover	Kane Mitchell	Kane Mithcell	Draft for comment	5 November 2024
D	Mikayla Cover	Kane Mitchell	Kane Mithcell	Draft for comment	5 December 2024
E	Mikayla Cover	Kane Mitchell	Kane Mithcell	Draft for comment	24 January 2025
F	Mikayla Cover	Kane Mitchell	Kane Mithcell	Draft for comment	13 March 2025

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