



December 2024 Sampling Event Report

PFAS OMP – RAAF Base Learmonth

Department of Defence

27 November 2025

→ **The Power of Commitment**



Project name		Defence PFASIM LC WA					
Document title		December 2024 Sampling Event Report PFAS OMP – RAAF Base Learmonth					
Project number		12641234					
File name		12641234-REP-A-RAAF Learmonth December 2024 Factual Report.docx					
Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S3	A			On file		On file	18/09/25
S4	0						7/11/25

GHD Pty Ltd | ABN 39 008 488 373

Contact: Technical Director | GHD
999 Hay Street, Level 10
Perth, Western Australia 6000, Australia
T +61 8 6222 8222 | **F** +61 8 6222 8555 | **E** permail@ghd.com | **ghd.com**

© GHD 2025
This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

List of acronyms

Acronym	Term
ADWG	Australian Drinking Water Guidelines
AFFF	Aqueous film-forming foam
AHD	Australian Height Datum
AS/NZS	Australian Standards/ New Zealand Standards
bgl	Below ground level
CoC	Chain of Custody
CSM	Conceptual Site Model
DCMM	Defence Contamination Management Manual
Defence	Department of Defence
DO	Dissolved oxygen
DSI	Detailed Site Investigation
DQIs	Data Quality Indicators
DWER	Department of Water and Environmental Regulation
EC	Electrical Conductivity
EPA	Environmental Protection Authority
EPC	Exposure Point Concentration
ERA	Ecological Risk Assessment
HDPE	High-Density Polyethylene
HEPA	Heads of EPA
LCS	Laboratory control sample
LOR	Limit of reporting
MW	Monitoring Well
NEMP	National Environmental Management Plan Version 3.0
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NPUG	Non-Potable Use of Groundwater
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation reduction potential
PFAS	Per- and poly-fluoroalkyl substances
PFBS	Perfluorobutane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PMAP	PFAS Management Area Plan

Acronym	Term
QA/QC	Quality Assurance and Quality Control
RAAF	Royal Australian Air Force
RPD	Relative percentage difference
SAQP	Sampling Analysis and Quality Plan
SW	Surface Water
TDS	Total Dissolved Solids
WA	Western Australia

List of units

Units	Term
%	Percentage
°C	Degrees Celsius
µg/L	Micrograms per Litre
µS/cm	Micro Siemens per Centimetre
g	Grams
km	Kilometre
L	Litre
m	Metre
mg/kg	Milligrams per Kilogram
mm	Millimetre
mV	Millivolt
pH	Potential of Hydrogen

Contents

List of acronyms	i
List of units	i
1. Introduction	1
1.1 Objectives	1
1.2 Purpose of this report	1
2. Scope of work	2
2.1 Sampling locations	2
2.1.1 Groundwater monitoring wells	2
2.1.2 Seepage monitoring locations	2
2.1.3 Surface water and sediment monitoring locations	3
2.2 SAQP deviations	3
3. Sampling methodology	5
3.1 Groundwater sampling	5
3.2 Surface water sampling	6
3.3 Sediment sampling	7
3.4 Seepage sampling	8
3.5 Quality assurance and quality control	8
4. Guideline values	9
5. Field observations and results	10
5.1 General observations	10
5.2 Field observation and measurements	10
5.3 Summary of analytical results	11
5.3.1 Groundwater	11
5.3.2 Seepage water	13
5.3.3 Surface water	13
5.3.4 Sediment	14
6. Summary and recommendations	15
6.1 Summary of monitoring event	15
6.2 Upcoming sampling events	16
6.3 Upcoming ongoing monitoring report	16
7. References	17
8. Limitations	18

Table index

Table 1	Groundwater monitoring locations	2
Table 2	Seepage water monitoring locations	3
Table 3	Surface water and sediment monitoring locations	3
Table 4	Summary of deviations from the OMP SAQP	3

Table 5	Groundwater sampling methodology	5
Table 6	Surface water monitoring methodology	7
Table 7	Sediment sampling methodology	8
Table 8	Relevant PFAS assessment guideline values	9
Table 9	General observations	10
Table 10	Summary of field observations and measurements	10
Table 11	Deviations from historical dataset – groundwater analytical results	12
Table 12	Exceedances of non-standard LOR groundwater results and EPC	12
Table 13	Exceedances of non-standard LOR seepage results and EPC	13
Table 14	Exceedances of non-standard LOR surface water results and EPC	14
Table 15	Summary of sampling event	15

Figure index

Figure 1	Site Location and Management Area	20
Figure 2	Source Areas	21
Figure 3	Monitoring Locations	22
Figure 4	Inferred Groundwater Contours – December 2024	23
Figure 5	Groundwater PFOS concentrations – December 2024	24
Figure 6	Groundwater PFHxS concentrations – December 2024	25
Figure 7	Groundwater PFOA concentrations – December 2024	26
Figure 8	Surface Water and Seepage Water PFOS+PFHxS concentrations – December 2024	27
Figure 9	Surface Water and Seepage Water PFOA concentrations – December 2024	28
Figure 10	Sediment PFAS Concentrations – December 2024	29

Appendices

Appendix A	Figures
Appendix B	Data validation
Appendix C	Results tables
Appendix D	Equipment calibration
Appendix E	Laboratory reports and chain of custody documents
Appendix F	Field notes

1. Introduction

GHD Pty Ltd (GHD) has been engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at Royal Australian Air Force (RAAF) Base Learmonth (hereafter referred to as the 'base') in Exmouth, Western Australia (WA). The location of the base, the surrounding PFAS Management Area and key base features are shown in Figure 1 and Figure 2, Appendix A.

The OMP (Defence, 2019) and its associated Sampling Analysis and Quality Plan (GHD, 2025b) outline the rationale and scope for the monitoring of the concentrations and extent of PFAS in groundwater, surface water, sediment and seepage water at the base and within the surrounding Management Area. Monitoring is undertaken in November and June of each year. Due to a delay in project commencement, the monitoring event scheduled for November 2024 was instead undertaken between December 2024 and January 2025. This Sampling Event Factual Report documents the results of the sampling event, which is hereafter referred to as the December 2024 Sampling Event.

1.1 Objectives

The key objectives of the OMP are to evaluate:

- The spatial and temporal (including seasonal) nature and extent of PFAS impact in the environment associated with site sources of PFAS derived from legacy use of aqueous film-forming foam (AFFF);
- Changes to the Conceptual Site Model (CSM), which describes the current understanding of PFAS sources, transport pathways and receptors;
- Whether current risks to human and ecological receptors require review;
- The influence that risk management activities at the base, as outlined in the PFAS Management Area Plan (PMAP) (Defence, 2019) have had on PFAS in the environment; and
- Whether any identified changes trigger an action and/or review.

The data will assist in the timely identification of risks and inform Defence's approach to the management of PFAS, including updates and revisions to the PMAP.

1.2 Purpose of this report

This Sampling Event Factual Report has been prepared to document the results of the December 2024 sampling event, specifically highlighting first-time detections and/or new exceedances of relevant guideline values for perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), perfluorooctanoic acid (PFOA) and perfluorobutane sulfonic acid (PFBS).

An Ongoing Monitoring Report (OMR) will be prepared following the completion of each 12-month sampling period or as otherwise agreed.

This report has been prepared with reference to the Defence *Ongoing Monitoring Program Reporting Guidance* issued in February 2024 (Defence, 2024).

2. Scope of work

The scope of works was completed with reference to the OMP SAQP (GHD, 2025b), as follows:

- Organise fieldwork and obtain approval for base access to monitoring locations.
- Collection of samples and water quality parameters from nominated locations (refer to Section 2.1)
- Collection of samples for quality assurance and quality control (QA/QC).
- Analysis of samples for PFAS at limit of reporting (LOR) nominated in the SAQP.
- Data management of the OMP field and laboratory data in Defence ESdat database.
- Preparation of this Sampling Event Factual Report for the December 2024 sampling event.

2.1 Sampling locations

2.1.1 Groundwater monitoring wells

The groundwater monitoring locations are presented in Table 1 and in Figure 3, Appendix A.

Table 1 Groundwater monitoring locations

Area	Monitoring well ID
Source areas	Source 1 – Maintenance Area: MW018, MW021, MW112, MW113, MW114, MW115, MW162, MW164, MW165, MW166, MW167, MW168, MW211, MW233. Source 2 – Fuel Farm: MW105, MW148D, MW148S, MW151, MW159, MW238
Pathway (northern, central and southern drainage channels)	MW102, MW103, MW104, MW122, MW124, MW126, MW127, MW134, MW135, MW139, MW140, MW143, MW144, MW145, MW146, MW147, MW170, MW172, MW175, MW180, MW181.
Receptor (Wapet Creek)	MW137 [^] , MW141 [^] , MW176 [^] , MW177 [^] , MW178 [^] , MW179 [^] .
Additional wells	MW132 [#] , MW174 [#] , MW222 (previously MW0124) [#] , MW227 (previously SMB1) [#] to MW230 (previously SMB4) [#]
Notes: *A non-standard LOR (not greater than 0.0003 µg/L for PFOS plus PFHxS and 0.0005 µg/L for PFOA) was applied at these locations so that a holistic assessment of potential impacts to identified receptors can be made by comparing PFAS concentrations with the exposure point concentrations (EPC) adopted to inform the Ecological Risk Assessment (ERA) (GHD, 2019). [^] Sampling of all screened intervals at multilevel/nested wells locations at receptor locations was applied so that a holistic assessment of potential impacts to identified receptors can be made. Multilevel/nested wells outside of the receptor zone continue to have only the shallowest, non-dry well monitored. [#] Locations that were subject to analysis to non-standard ('low level') LOR to provide a preliminary assessment of PFAS concentrations to the revised Australian Drinking Water Guidelines (ADWGs) that were released in June 2025 (refer to Section 4).	

2.1.2 Seepage monitoring locations

The seepage monitoring locations are presented in Table 2 and are shown in Figure 3, Appendix A.

Table 2 Seepage water monitoring locations

Area	Seepage location ID
Receptor (Exmouth Gulf)	OTH103, OTH106, OTH107, OTH129, OTH132, OTH134.
Notes: A non-standard LOR (not greater than 0.0003 µg/L for PFOS plus PFHxS and 0.0005 µg/L for PFOA) was applied at all seepage locations so that a holistic assessment of potential impacts to identified receptors can be made by comparing PFAS concentrations with the EPC adopted to inform the ERA (GHD 2019).	

2.1.3 Surface water and sediment monitoring locations

The co-located surface water and sediment locations are presented in Table 3 and are shown in Figure 3, Appendix A.

Table 3 Surface water and sediment monitoring locations

Area	Surface water sampling location ID	Sediment sampling location ID
Drainage channels (source and pathway)	SW108, SW113, SW114, SW121, SW122, SW123, SW124, SW125, SW157, SW166, SW168, SW170, SW174, SW176, SW189, SW190, SW192, SW193*, SW198, SW199, SW200, SW219, SW227, SW231, SW234, SW235, SW243, SW265, SW277, SW278, SW279, SW288, SW291, SW292, SW293, SW298*	SD199, SD200, SD219, SD108, SD113, SD114, SD121, SD122, SD123, SD124, SD125, SD157, SD166, SD168, SD170, SD174, SD176, SD189, SD190, SD192, SD193, SD198, SD227, SD231, SD234, SD235, SD243, SD265, SD277, SD278, SD279, SD288, SD291, SD292, SD293, SD298
Receptor (Wapet Creek)	SW001, SW205, SW207, SW208*, SW209*, SW210*, SW211*, SW300, SW301*, SW302, SW303, SW304, SW305*	SD205, SD207, SD208, SD209, SD210, SD211, SD300, SD301, SD302, SD303, SD304, SD305, SD009
Notes: *A non-standard LOR (not greater than 0.0003 µg/L for PFOS plus PFHxS and 0.0005 µg/L for PFOA) was applied at these locations so that a holistic assessment of potential impacts to identified receptors can be made by comparing PFAS concentrations with the EPC adopted to inform the ERA (GHD, 2019).		

2.2 SAQP deviations

The December 2024 sampling event was completed with reference to the OMP SAQP (GHD, 2025b), GHD's health and safety protocols and GHD's standard operating procedures for field work, which have been developed in accordance with WA contaminated land guidance. Deviations from the OMP SAQP are summarised in Table 4 below.

Table 4 Summary of deviations from the OMP SAQP

Aspect / Location	Deviation	Comments
Timing of sampling event	Sampling event completed between December 2024 and January 2025, rather than November 2024.	Following a delay in commencement of the project, the sampling event could not be commenced until December 2024, rather than November 2024 as intended by the OMP. Minimal impact – the sampling event was completed within the 'wet season', which the November event is intended to represent, and is therefore considered suitably representative.
MW132, MW159	Not sampled	These monitoring wells were blocked above the standing water level and therefore could not be sampled. Minimal impact – MW159 is a source area monitoring well and hydraulically down-gradient locations (i.e., nearer to sensitive receptors) were able to be sampled. The historical range of PFAS concentrations at MW159 is well understood. MW132 was added to the December 2024 sampling event to provide additional data concerning PFAS impacts between the base and the

Aspect / Location	Deviation	Comments
		potable water production bores to the west of the base. It was unable to sampled though other monitoring wells in this area (i.e., MW174, MW222, MW227 to MW230) were sampled.
MW138	Sampled but not gauged	Multi-level well MW138 was previously noted to be damaged and was not sampled during the May 2024 monitoring event (Stantec, 2024) and thus was excluded from the OMP SAQP. During the December 2024 event, the well was inspected, found to be partially blocked and a sample was able to be collected from an intermediate well level (MW138B) using a peristaltic pump. The well could not however be gauged due to the blockage preventing the dip meter from being deployed. Positive impact – provides an additional PFAS concentration datapoint.
MW141A	Not sampled	This well forms part of a multi-level well set and was blocked above the screened interval and therefore not sampled. Minimal impact – the deeper wells in the set (i.e., MW141B, MW141C and MW141D) were able to be sampled.
MW163	Not sampled	This monitoring well was accidentally struck by a vehicle during the sampling event. The headworks and bore casing were damaged and therefore the well could not be sampled. Minimal impact – The range of PFAS concentrations at this well is well understood from historical data. Base-wide groundwater contours were able to be inferred based on the wider monitoring network.
SW108, SW113, SW114, SW121, SW122, SW123, SW124, SW125, SW129, SW157, SW166, SW168, SW170, SW174, SW176, SW189, SW190, SW193, SW192, SW198, SW199, SW200, SW210, SW227, SW231, SW234, SW235, SW243, SW265, SW278, SW279, SW288, SW291, SW292, SW293, SW298.	Not sampled	These surface water monitoring locations were dry at the time of the sampling event. Minimal impact – supports existing understanding concerning temporally limited duration of flow in the base drains and waterways. Sediment data was collected at co-located monitoring locations.
SW301, SW305	Not analysed to non-standard LOR	Insufficient sample volume was collected at these receptor zone surface water monitoring locations to enable application of the non-standard LOR. Minimal impact – alternative receptor zone location (i.e., Wapet Creek) SW001 was analysed to the non-standard LOR. A total of four receptor zone surface water samples were analysed to the non-standard LOR as part of the sampling event, which is considered sufficient to meet the intention of the non-standard LOR analysis.
MW124	Sampled via bailer	The HydraSleeve® was accidentally dropped into the monitoring well casing during deployment, Field personnel attempted to retrieve the Hydrasleeve® but were unsuccessful within the timeframe that was available (noting the location is airside and there was a time restriction). The monitoring well was therefore sampled using a bailer. All other aspects of the sampling procedure remained as per the Hydrasleeve® sampling method. Minimal impact – despite the use of an alternative sampling method, the PFAS concentrations recorded were consistent with historical data.
All locations	Daily “bump tests” not undertaken	The water quality meter used to record physicochemical parameters of water samples during the sampling event was calibrated by the supplier prior to the sampling event (refer to Appendix D) though daily “bump tests” to monitor calibration throughout the sampling event were not undertaken. Minimal impact – recorded physicochemical parameters were consistent with the historical dataset.

3. Sampling methodology

The methodology for the December 2024 sampling event was completed with reference to the SAQP (GHD, 2025b), as outlined in the following sections.

3.1 Groundwater sampling

The groundwater sampling methodology is outlined in Table 5.

Table 5 Groundwater sampling methodology

Activity	Details
Well gauging	Monitoring wells were first gauged to allow subsequent correction of groundwater levels relative to Australian Height Datum (AHD) prior to groundwater sample collection. All depth measurements referenced the top of casing (TOC) of the monitoring well as an established datum.
Groundwater physicochemical parameters	Groundwater physicochemical parameters were recorded via a water quality meter from HydraSleeves® or purged water via a peristaltic pump. The following parameters were recorded: – Temperature. – pH. – Electrical conductivity (EC). – Oxidation reduction potential (ORP). – Dissolved oxygen (DO). – Total dissolved solids (TDS). The water quality meter was calibrated by the equipment supplier. General observations regarding water quality (e.g., turbidity, colour etc.) or obvious indicators of contamination (e.g., sheens) were also recorded.
Deployment and retrieval of HydraSleeves®	In compliance with section 18 of the Heads of EPA National Environmental Management Plan 3.0 (HEPA NEMP), groundwater samples were collected using bore-dedicated polypropylene HydraSleeves®. The HydraSleeves® were installed and left in place for a minimum of 24 hours prior to retrieving for sample collection. Where monitoring well construction details were available, the HydraSleeves® were positioned to target the approximate mid-section of the water column beneath the screened interval. Where construction details were not available, the HydraSleeves® were placed approximately 1 m from the base of the monitoring well (where sufficient depth of water was present within the well column). Samples were collected via continuous pull method at a rate allowing the water to pass through the check valve into the sample sleeve. Samples were discharged immediately (minimise changes in chemistry) by piecing the HydraSleeve® in the middle to upper section with a discharge tube. Following sampling, new HydraSleeves® were deployed in preparation for the next OMP monitoring event using the same string for consistency (same depth of sampling i.e. within screen depth).
Alternative sampling methodology (peristaltic pump)	Sampling via low flow micro-purge pump occurred where a groundwater well casing was too narrow to accommodate a HydraSleeve® (i.e., multi-level wells). The following multi-level monitoring well locations with narrow casings required the use of the low flow pump: MW135, MW137, MW138, MW140, MW141, MW143, MW144, MW145, MW146, MW147, MW175, MW176, MW177, MW178, MW179, MW180 and MW181. The methodology comprised: – Post-gauging, each monitoring well was purged using the low flow micro-purge pump and inert well-dedicated High-density Polyethylene (HDPE) tubing. The upper end of the tubing was connected to the flow cell of a water quality meter positioned to prevent entrapment of oxygen. – The pump intake was placed approximately 0.5 m below the top of screen (or at least 0.5 m below the top of the water column) to ensure collection of samples representative of groundwater quality beneath the base.

Activity	Details
	– Measurement of water quality parameters was undertaken immediately after the flow cell was full and continued thereafter at two to five-minute intervals during the purging process. – Purging was undertaken until stabilisation of field parameters was achieved after which the well was subsequently sampled. Parameters were considered stable when they were within the following range (where practicable within the time constraints of the program): • Temperature: +/- 0.2 °C* • pH: +/- 0.05 • EC: +/- 3% • DO: +/- 10% • ORP: +/- 10 mV – Representative groundwater samples were collected directly from the HDPE tubing into laboratory supplied pre-preserved sample containers. <i>*Note: The SAQP (GHD, 2025) erroneously states variation in temperature should be +/- 0.02°C rather than +/- 0.2 °C</i>
Abstraction bore sampling	Samples from groundwater abstraction bores (MW222 and MW227 to MW230) were collected via the 'first flush' sampling method, which allows collection of a groundwater sample that is representative of the use of the bore, whereby the user may not purge the water line. The 'first flush' sampling method involves collecting the first draw of water from the tap or bore outlet. Field parameters were recorded following sampling
Field records	Field records included the following information: – Gauging data – Sampling time and date. – Weather conditions. – Sample collection method. – Observations regarding water quality (e.g., turbidity, colour etc.) or obvious indicators of contamination (e.g., sheens). – Sampling equipment decontamination procedures where non-disposable sampling equipment is utilised. – Calibration records. All sample documentation including field notes, reporting records, CoC and equipment calibration certificates and procedures were retained within project files.
Decontamination procedure	Dedicated HydraSleeves® or HDPE tubing (in the event where HydraSleeve® was not used) were used at each groundwater bore thus no cross contamination occurred. Single use nitrile gloves were worn during sampling and appropriately disposed of between each sampling location. All re-usable sampling equipment was thoroughly washed using PFAS-free detergent (mixed per supplier instructions) then double rinsed with clean laboratory supplied rinsate water before the sample collection.
Sample identification, preservation transport and holding times	Each sample container was pre-labelled by the laboratory with a unique barcode which was scanned into a mobile application to generate the CoC. Samples were collected directly into appropriately preserved laboratory supplied bottles (Teflon-free) and packed in chilled containers for delivery to the laboratory under CoC documentation. Sample containers, preservation procedures, sample storage requirements and holding times was undertaken in accordance with those recommended by Standards Australia (AS/NZS 5667.1:1998).

3.2 Surface water sampling

The methodology for the surface water monitoring is outlined in Table 6.

Table 6 *Surface water monitoring methodology*

Item	Details
Field parameters	Surface water physiochemical parameters (i.e. temperature, pH, EC, ORP, DO and TDS) were recorded at the time of sampling using a pre-calibrated water quality meter. Field observations such as odours or sheen presence were also recorded on field sampling sheets.
Sampling method	Where the embankment of the water body was stable and the water body could be safely accessed, surface water samples were collected by hand, directly into the laboratory supplied sample containers using a 'Grab' (manual) sample method. Where depth permitted, the sample container was positioned at least 10 cm below the surface water level and above the sediment bed and oriented with the capped opening facing downwards to avoid the collection of surface films. Once in position, the container cap was removed to allow sample collection. Where sampling points cannot be safely accessed, surface water samples were collected using a long-handled sampler and decanted into the laboratory supplied sample containers. Samples were collected with reference to Australian/New Zealand Standards (AS/NZS 5667.1:1998) Water quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
Sample collection	Water samples were placed directly into appropriately labelled, laboratory supplied sample bottles and packed in chilled containers for delivery to the laboratory under Chain of Custody documentation.
Decontamination	Single use nitrile gloves were worn during sampling and appropriately disposed of between each sampling location. All re-usable sampling equipment was thoroughly washed using PFAS and phosphate-free detergent (mixed per supplier instructions), then double rinsed with laboratory supplied rinsate water before the sample collection.
Sample identification, preservation, transport and holding times.	Each sample container was pre-labelled by the laboratory with a unique barcode which was scanned into a mobile application to generate the CoC. Samples were contained in appropriately preserved laboratory supplied bottles (Teflon-free) and packed in chilled containers for delivery to the laboratory under Chain of Custody documentation. Sample containers, preservation procedures, sample storage requirements and holding times were undertaken in accordance with those recommended by Standards Australia (AS/NZS 5667.1:1998 as appropriate).
Field records	Field records included the following information: – Sampling time, date and name of the sampler. – Weather conditions. – Sample collection method. – Field parameters – Observations regarding water quality (e.g. turbidity, colour etc.) or obvious indicators of contamination (e.g. sheens). – Depth of water body, flow rate and sample depth. – Sampling equipment decontamination procedures where non-disposable sampling equipment was utilised. – Calibration records. All sample documentation including field notes, reporting records, CoC and equipment calibration certificates and procedures were retained within project files.

3.3 Sediment sampling

The methodology for sediment sampling is outlined in Table 7.

Table 7 *Sediment sampling methodology*

Item	Details
Sample collection	Sediment samples were collected at the sediment/water interface using hand tools (e.g. trowel or PVC pipe) with samples placed directly into appropriately labelled, laboratory supplied sample containers and packed in chilled containers for delivery to the laboratory under Chain of Custody documentation.
Field records	Field records included the following information: – Sampling time, date and name of the sampler. – Sample description. – Weather conditions. – Sample collection method. – Observations regarding sediment quality (e.g., colour, grain size etc.) or obvious indicators of contamination (e.g., staining). – Sampling equipment decontamination procedures where non-disposable sampling equipment was utilised. All sample documentation including field notebooks, reporting records, CoC and equipment calibration certificates and procedures were retained within project files.
Decontamination	All re-usable sampling equipment was thoroughly washed using PFAS-free detergent (mixed per supplier instructions), then double rinsed with laboratory supplied rinsate water before the sample collection. Single-use nitrile gloves were worn during sampling.

3.4 Seepage sampling

Seepage sampling was completed by advancing a shallow excavation in the beach sand; just above where inundation by wave action was occurring, using a spade. In-situ water parameters were measured from water seeping into the excavation using a calibrated water quality meter. Water seeping into the excavation was purged prior to measuring water quality parameters (using a dedicated syringe or jug). Once the excavation had recharged, a seepage sample was collected directly into sample containers using a 'grab' (manual) sample method. Seepage sampling occurred during outgoing tides, as far as practicable within the temporal constraints of the tidal cycle at the time of the event.

Procedures concerning field records, decontamination, sample identification, handling, preservation and transport for seepage water sampling were consistent with those employed for groundwater sampling, as described in Table 5.

3.5 Quality assurance and quality control

Quality assurance (QA) involves all the actions, procedures, checks and decisions, undertaken to ensure the representativeness and integrity of samples and accuracy and reliability of analytical results (NEPM, 2013). Quality control (QC) involves protocols to monitor and measure the effectiveness of QA procedures.

The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (GHD, 2025b). A review of the field and laboratory QA/QC performance from the sampling event is presented in the QA/QC data validation report in Appendix B. Key findings of the data validation report include:

- The majority of the calculated relative percentage difference (RPD) in concentrations for each duplicate pair, as presented in the tables in Appendix B were within acceptable limits. In most cases, RPD values greater than the acceptance criterion of 30% are considered reflective of the proximity of the reported concentrations to the LOR (i.e., less than 10 times the LOR). On this basis, the RPDs greater than 30% are considered to have minimal impact on the data quality.
- Field and rinsate blank analytical results were less than the LOR in all cases.

Overall, the QA/QC assessment concluded that the collected data is considered appropriate for the work undertaken and are considered usable for the purpose of this assessment.

All data collected during this event has been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual (DCMM) requirements (Defence, 2021).

4. Guideline values

A summary of the current PFAS guideline values for groundwater and surface water considered relevant to the base is presented as Table 8. The guideline values are largely based upon:

- The PFAS NEMP (HEPA, 2025) which presents a consolidated set of health- and ecology-based Australian PFAS assessment levels for soil and water that are derived from various guidelines and publications. It is noted that the aquatic ecosystems guideline value for PFOS is lower than the standard LOR that was applied at most monitoring locations. Consistent with the OMP SAQP, a lower, non-standard LOR was applied during the monitoring event at selected groundwater, seepage water and surface water locations to support ecological risk screening by enabling comparison of PFAS concentrations with the EPCs adopted to inform the ERA (GHD, 2019).
- The National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines (ADWGs) for PFAS that were published on 25 June 2025 (NHMRC, 2025), after the December 2024 sampling event. It is noted that the ADWG value for PFOS is less than the standard PFAS LOR that was applied at most monitoring locations.

It is noted that there is currently no Australian regulatory endorsed screening criteria for risk posed to ecology or human health by PFAS in sediment.

Table 8 *Relevant PFAS assessment guideline values*

Exposure scenario	Source	Assessment guideline value (µg/L)				
		PFOS	PFHxS	PFOS+ PFHxS	PFOA	PFBS
Groundwater						
Health: potable use of groundwater	NHMRC (2025)	0.008	0.03	-	0.2	1
Surface water and seepage						
Health: Recreational water use	PFAS NEMP	2	2	2	10	-
Ecology: aquatic ecosystems (99% species protection)	PFAS NEMP	0.00023	-	-	19	-

It is important to note that an ERA (GHD, 2019) has been completed for the base to assess the potential risks to the environment associated with presence of PFAS within the Management Area. While the OMP evaluates PFAS concentration data with reference to the ecology-based guideline values identified in Table 8, decision-making concerning changes to risks posed to ecology within the Management Area should continue to be made with reference to the ERA conclusions and the dataset that informed it.

5. Field observations and results

5.1 General observations

The sampling event was completed from 9 to 18 December 2024 and 13 to 16 January 2025. The weather conditions and general observations (including activities that may impact the monitoring program) recorded during the sampling event are summarised in Table 9.

Table 9 General observations

Items	Observations
Weather Conditions	The weather was observed to be mostly hot and dry with some humidity, with average temperatures of approximately 38°C. Rainfall of 3.0 mm and 9.8 mm was recorded in the town of Exmouth on 12 and 13 December 2024 respectively. No rainfall was recorded within the week prior to sampling. Information obtained from Exmouth Town (Station ID 005051) (Bureau of Meteorology, 2025).
Estate Management Works, Training Activities and/or Construction Works.	Ongoing construction works were observed on Murat Rd adjacent to RAAF Learmonth during the sampling event

5.2 Field observation and measurements

The observations and measurements recorded during the December 2024 sampling event are summarised in Table 10.

Table 10 Summary of field observations and measurements

Item	Description
Access and sample collection	Most sampling locations were accessible and able to be sampled. Some groundwater locations were unable to be sampled due to being damaged or blocked. Many surface water locations were dry, reflective of the climate of the base and limited duration of flow in the base drains and waterways (refer to Table 4).
Water and sediment observations	Groundwater was predominantly clear and colourless or pale yellow or brown, with a low sediment load and no odours or sheens. Seepage water was predominantly clear and colourless with no odours or sheens. High sediment loads were noted at locations OTH106 and OTH107. Surface water was colourless to pale yellow or brown with low to moderate sediment loads. Organic odours and bacterial sheens were noted at some locations. Sediment samples were predominantly brown or red-brown sand, with varying fractions of silt and gravel.
Groundwater flow direction	The calculated groundwater elevations (m AHD) are presented in Table C1 (Appendix C) and inferred groundwater flow direction presented in Figure 4, Appendix A. Groundwater elevations across the base at the time of the sampling event ranged from -0.663 (MW222) to 0.963 m AHD (MW180), which is comparable with the historical range. Based on the recorded groundwater elevations, groundwater flows generally inland from the Exmouth Gulf and from the west towards the inland clay pan. This is broadly consistent with the flow direction inferred based on previous gauging data and as part of the Detailed Site Investigation (DSI) (GHD, 2018).
Physicochemical parameters	The recorded physicochemical parameters are presented in Tables C1, C2 and C3 in Appendix C and are summarised below. Field sheets are presented in Appendix F. Groundwater - pH ranged from 6.29 (MW143A) to 8.34 (MW164) indicating slightly acidic to alkaline conditions. - EC ranged from 1,074 µS/cm (MW228) to 105,311 µS/cm (MW180A) indicating slightly saline to hypersaline conditions.

Item	Description
	– DO ranged from 0.01 mg/L (MW176D) to 5.12 mg/L (MW238) indicating poorly to moderately oxygenated conditions. – Redox ranged from -137.1 mV (MW177A) to 107.7 mV (MW180) indicating both reducing and oxidising conditions. – Temperature ranged from 27.6 °C (MW113) to 35.9 °C (MW230). Seepage water – DO ranged from 3.68 mg/L (SW305) to 5.83 mg/L (OTH134) indicating moderately oxygenated conditions. – EC ranged from 54,425 µS/cm (OTH103) to 58,125 µS/cm (OTH134) indicating hypersaline conditions. – pH ranged from 7.66 (OTH134) to 8.11 (OTH129) indicating slightly alkaline to alkaline conditions. – Redox ranged from -65.2 mV (OTH129) to -125.9 mV (OTH107) indicating both reducing and oxidising conditions. – Temperature ranged from 29.2 °C (OTH132) to 32.7 °C (OTH129). Surface water – DO ranged from 0.56 mg/L (SW305) to 5.76 mg/L (SW001) indicating poorly to moderately oxygenated conditions. – EC ranged from 53,915 µS/cm (SW303) to 87,350 µS/cm (SW211) indicating hypersaline conditions. – pH ranged from 6.90 (SW300) to 8.08 (SW301) indicating circum-neutral to alkaline conditions. – Redox ranged from -142.3 mV (SW304) to 101.1 mV (SW305) indicating both reducing and oxidising conditions. – Temperature ranged from 26.8 °C (SW205) to 37.4 °C (SW300).

5.3 Summary of analytical results

The PFAS analytical results for groundwater, surface water, sediment and seepage water from this sampling event are presented in Table C4 to C7 in Appendix C and are also summarised in Figure 5 to Figure 10 in Appendix A.

5.3.1 Groundwater

72 primary groundwater samples were analysed for PFAS, with:

- 22 samples reporting **PFBS** concentrations above the LOR. Four of these were above the ADWG value (1 µg/L).
- 37 samples reporting **PFOS** concentrations above the LOR. Of these, 23 samples reported concentrations above the ADWG value (0.008 µg/L). A further 23 samples reported concentrations beneath the standard LOR (i.e., <0.01 µg/L) and it therefore cannot be determined whether PFOS concentrations in these samples were above or below the ADWG value.
- 33 samples reporting **PFHxS** concentrations above the LOR. Of these, 21 samples reported concentrations greater than the ADWG value (0.03 µg/L).
- 18 samples reporting **PFOA** concentrations above the LOR. Of these, six samples reported concentrations greater than the ADWG value (0.2 µg/L).

A summary of groundwater locations where concentrations were greater than those previously reported (i.e., first-time detections or new maximums) is presented as Table 11.

Table 11 Deviations from historical dataset – groundwater analytical results

Item	Sample location	PFBS (µg/L)		PFHxS (µg/L)		PFOA (µg/L)		PFOS (µg/L)	
		Dec 2024	Previous Max	Dec 2024	Previous Max	Dec 2024	Previous Max	Dec 2024	Previous Max
First time detections?	MW127	0.02	<0.02	0.71	<0.02	0.04	<0.01	0.72	<0.01
New historical maximum	MW105	No new maximum		No new maximum		No new maximum		0.08	0.06
	MW115	No new maximum		1.81	1.52	No new maximum		No new maximum	
	MW127	0.02	<0.02	0.71	<0.02	0.04	<0.01	0.72	<0.01
	MW222	0.023	0.02	No new maximum		No new maximum		0.02	0.016

Non-standard LOR analysis

As identified in Section 2.1.1, selected groundwater samples (MW137, MW141, MW176, MW177, MW178, MW179) were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the surface water and seepage water EPC for PFOS+PFHxS and PFOA that were adopted to inform the ERA (GHD, 2019). A comparison of the reported concentrations with the EPC is presented as Table 12.

Table 12 Exceedances of non-standard LOR groundwater results and EPC

Sample Location		PFOS+PFHxS (µg/L)	PFOA (µg/L)
EPC – Surface water (Wapet Creek)		0.0059	0.0005
EPC – Seepage (Exmouth Gulf)		0.0037	0.0005
EPC – Seepage (Wapet Creek)		0.0022	0.0005
MW137	A	0.0029	<0.0005
	B	0.0042	<0.0005
	C	0.0103	<0.0005
	D	0.013	<0.0005
MW141	B	<0.002	<0.0005
	C	<0.002	<0.0005
	D	<0.002	<0.0005
MW176	A	<0.0002	<0.0005
	B	<0.0002	<0.0005
	C	0.0026	<0.0005
	D	0.0057	<0.0005
MW177	A	0.0014	<0.0005
	B	0.0019	<0.0005
	C	0.002	<0.0005
	D	0.002	<0.0005
MW178	A	<0.0002	<0.0005
	B	<0.0002	<0.0005
	C	0.0004	<0.0005
	D	0.0044	<0.0005
MW179	A	0.0002	<0.0005
	B	0.0003	<0.0005
	C	0.0005	<0.0005

Sample Location		PFOS+PFHxS (µg/L)	PFOA (µg/L)
	D	0.0003	<0.0005
Notes: Blue highlighting = concentration exceeds seepage EPC for Wapet Creek. Blue highlighting and purple text= concentration exceeds seepage EPC for Wapet Creek and the Exmouth Gulf. Blue highlighting and italics = concentration exceeds seepage and surface water EPC			

5.3.2 Seepage water

In summary, six primary seepage water samples were analysed for PFAS compounds, with:

- Three samples reporting a **PFOS** concentration above the LOR. Two of these samples (OTH132 and OTH134 with concentrations of 0.0014 and 0.0007 µg/L respectively) exceeded the aquatic ecosystems guideline value (0.00023 µg/L), though were less than the recreational guideline value (2 µg/L).
- No samples reporting a **PFHxS** concentration above the LOR.
- Three samples reporting a **PFOS+PFHxS** concentration above the LOR. All reported concentrations were less than the recreational guideline value (2 µg/L).
- No samples reporting a **PFOA** concentration above the LOR.

There were no first-time detections or new maximum PFAS concentrations in seepage samples.

Non-standard LOR analysis

As identified in Section 2.1.2, seepage samples (OTH103, OTH106, OTH107, OTH129, OTH132 and OTH134) were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the seepage water EPC for PFOS+PFHxS and PFOA that were adopted to inform the ERA (GHD, 2019). A comparison of the reported seepage water concentrations with the relevant EPC is presented as Table 13.

Table 13 Exceedances of non-standard LOR seepage results and EPC

Sample Location	PFOS plus PFHxS µg/L	PFOA µg/L
EPC – Seepage (Exmouth Gulf)	0.0037	0.0005
OTH103	0.0002	<0.0005
OTH106	<0.0002	<0.0005
OTH107	<0.0002	<0.0005
OTH129	<0.0002	<0.0005
OTH132	0.0014	<0.0005
OTH134	0.0007	<0.0005
Notes: Blue highlighting = concentration exceeds seepage EPC.		

5.3.3 Surface water

12 primary surface water samples were analysed for PFAS compounds, with:

- Two samples reporting a **PFOS** concentration above the LOR. Both of these (SW001 and SW211 with concentrations of 0.0007 and 0.0051 µg/L respectively) exceeded the aquatic ecosystems guideline value (0.00023 µg/L). A further seven samples reported concentrations beneath the standard LOR (i.e., <0.01) that was applied and it therefore cannot be determined whether PFOS concentrations in these samples were above or below the aquatic ecosystems guideline value.
- One sample (SW211) reporting a **PFHxS** concentration above the LOR. The reported concentration (0.0007 µg/L) was less than the recreational guideline value (2 µg/L).

- Two samples reporting a **PFOS+PFHxS** concentration above the LOR. The reported concentrations (0.0007 and 0.0058 µg/L at SW001 and SW211 respectively) were less than the recreational guideline value (2 µg/L).
- No samples reporting a **PFOA** concentration above the LOR.

There were no first-time detections or new maximum PFAS concentrations in surface water samples.

Non-standard LOR analysis

As identified in Section 2.1.3, samples from selected surface water monitoring locations (SW001, SW208, SW209 and SW211) were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the surface water EPC for PFOS+PFHxS and PFOA that were adopted to inform the ERA (GHD, 2019). Other selected sites (SW298, SW210) were dry and were unable to be sampled. A comparison of the reported seepage water concentrations with the relevant EPC is presented as Table 14.

Table 14 Exceedances of non-standard LOR surface water results and EPC

Sample Location	PFOS plus PFHxS µg/L	PFOA µg/L
EPC – Surface water (Wapet Creek)	0.0059	0.0005
SW001	0.0007	<0.0005
SW208	<0.0002	<0.0005
SW209	<0.0002	<0.0005
SW211	0.0058	<0.0005
Notes: Blue highlighting = concentration exceeds surface water EPC.		

5.3.4 Sediment

49 primary sediment samples were analysed for PFAS compounds, with:

- 35 samples reporting a **PFOS** concentration above the LOR.
- 35 samples reporting a **PFHxS+PFOS** concentration above the LOR.
- Nine samples reporting a **PFHxS** concentration above the LOR.
- Two samples reporting a **PFOA** concentration above the LOR.
- No samples reporting a **PFBS** concentration above the LOR.

There were no first-time detections or new maximum PFAS concentrations in sediment samples.

6. Summary and recommendations

6.1 Summary of monitoring event

The findings and recommended actions from the December 2024 sampling event are summarised in Table 15.

Table 15 Summary of sampling event

Item	Comment	Recommended Action
Access to sampling locations	All locations were accessible.	Nil.
Location inaccessible, dry or blocked	With reference to Section 2.2 the following locations were unable to be sampled: – MW132, MW141A, MW159 - all casings on this multilevel well was blocked and unable to be sampled. – MW163 - the headworks and bore casing were damaged during the sampling event. – SW108, SW113, SW114, SW121, SW122, SW123, SW124, SW125, SW129, SW157, SW166, SW168, SW170, SW174, SW176, SW189, SW190, SW192; SW193, SW198, SW199; SW200, SW210, SW227, SW231, SW234, SW235, SW243, SW265, SW279, SW288, SW278, SW291, SW292, SW293, and SW298 - these surface water samples were dry and unable to be sampled.	Replacement/repair of the damaged or blocked monitoring wells is not recommended as a matter of priority at this time, given that: – The range of PFAS concentrations at the damaged and blocked wells is understood from historical data. – Nearby monitoring wells, including those situated closer to sensitive receptors, were able to be sampled. – Base-wide groundwater contours were able to be inferred based on the wider monitoring network. The forthcoming OMP Revision will review the value of these monitoring wells in the context of the OMP objectives and make a recommendation for repair, re-installation or otherwise of these monitoring wells. Future monitoring events will seek to collect samples from surface water monitoring locations, though it is noted that the absence of surface water across the monitoring network has been common throughout implementation of the OMP to date (GHD, 2025a).
Analytical results	72 groundwater samples, six seepage water samples, 12 surface water samples and 49 primary sediment samples were analysed. Concentrations recorded were generally consistent with historical data.	Locations will be sampled again during the next OMP sampling event. Data will be evaluated further within the context of the OMP objectives (refer to Section 1.1) as part of the forthcoming OMR.
First-time detections of PFBS, PFHxS, PFOA and/or PFOS	First-time detections of PFBS, PFHxS, PFOA and PFOS were recorded at groundwater monitoring well MW127. The monitoring well is located in the southern drainage channel pathway zone. Significant changes in PFAS concentrations in the monitoring wells positioned between MW127 and the hydraulically down-gradient sensitive receptors (i.e., Wapet Creek) were not noted. No obvious changes in the physicochemical profile or appearance of groundwater at the monitoring well were noted.	
New historical maximum concentrations	New concentrations were recorded at groundwater monitoring wells MW105, MW115, MW127 and MW222. Except for MW127 (discussed above), the new maximum concentrations were within the same order of magnitude as the previous maximums.	
New exceedance of human health guideline value?	Numerous groundwater monitoring locations recorded PFAS concentrations above the revised ADWGs that were released in June 2025, after the sampling event. It is noted that the standard LOR that	

Item	Comment	Recommended Action
	was applied (i.e., <0.01 µg/L) at most locations exceeds the revised ADWG for PFOS (0.008 µg/L). The base's potable water supply borefield, comprising ten bores, is located approximately 3 km west of the Base (i.e., inferred hydraulically up-gradient). Monitoring wells MW174, MW222 and MW227 to MW230 are positioned between the base and the borefield and reported PFOS concentrations below the non-standard LOR (i.e., <0.002 µg/L) and therefore below the ADWGs, apart from location MW222 which reported a concentration of 0.024 µg/L.	
New exceedance of ecological health guideline value?	No surface water or seepage water locations reported new exceedances of the adopted ecological guideline values for PFOS and/or PFOA. Selected groundwater, seepage and surface water samples were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the EPC adopted to inform the ERA (GHD, 2019). Three groundwater monitoring locations (MW137, MW176, and MW178) recorded concentrations above the EPCs, though none of the seepage or surface water locations reported concentrations above the EPCs.	

6.2 Upcoming sampling events

The June 2025 sampling event has been completed and reported on separately.

6.3 Upcoming ongoing monitoring report

The next OMR is scheduled to be delivered in Q4 2025, covering data collected between November 2023 and June 2025.

7. References

- Defence. (2018). *Contamination Management Manual (DCMM), Amended June 2021*.
- Defence. (2019). *RAAF Base Learmonth, PFAS Management Area Plan (PMAP)*. May 2019.
- Defence. (2021). *Contamination Management Manual (DCMM)*. March 2018, amended June 2021.
- Defence. (2021b). *Defence PFAS Construction and Maintenance Framework: Guidance for managing the risks of PFAS contamination for works on the Defence estate*. Version 3.0, dated August 2021: Infrastructure Division; Directorate of PFAS Investigation and Remediation.
- Defence. (2024). *Ongoing Monitoring Program Reporting Guidance*. 29 February 2024.
- Department of Defence. (2018). *Contamination Management Manual (DCMM), Amended June 2021*.
- Department of Defence. (2018). *Defence Contamination Management Manual (DCMM) Annex L Data Management, Amended June 2021*.
- GHD. (2018). *RAAF Base Learmonth: PFAS Investigations - Preliminary and Detailed Site Investigation Report*. December 2018.
- GHD. (2019). *RAAF Base Learmonth - Lead Consultant: Ecological Risk Assessment*. April 2019.
- GHD. (2025). *Sampling and Analysis Quality Plan, RAAF Base Learmonth*. 27 March, Rev 0.
- GHD. (2025). *Sampling and Analysis Quality Plan, RAAF Base Learmonth*. 27 March, Rev 0.
- GHD. (2025a). *Site Review Assessment RAAF Base Learmonth*. 24 January 2025.
- GHD. (2025b). *Sampling and Analysis Quality Plan, PFAS Ongoing Monitoring Plan, RAAF Base Learmonth*. March 2025.
- HEPA. (2025). *PFAS National Environmental Management Plan Version 3.0*. 2025.
- NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure*.
- NEPM. (2013). *National Environment Protection (Assessment of Site Contamination) Measure*.
- NHMRC. (2025, June 25). *NHMRC Review of PFAS in Australian Drinking Water*. Retrieved from <https://www.nhmrc.gov.au/health-advice/environmental-health/water/PFAS-review>
- Stantec. (2024). *PFAS OMP Biannual Monitoring Event Factual Report*. May 2024.

8. Limitations

This report has been prepared by GHD for Department of Defence and may only be used and relied on by Department of Defence for the purpose agreed between GHD and Department of Defence as set out in Section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Department of Defence arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

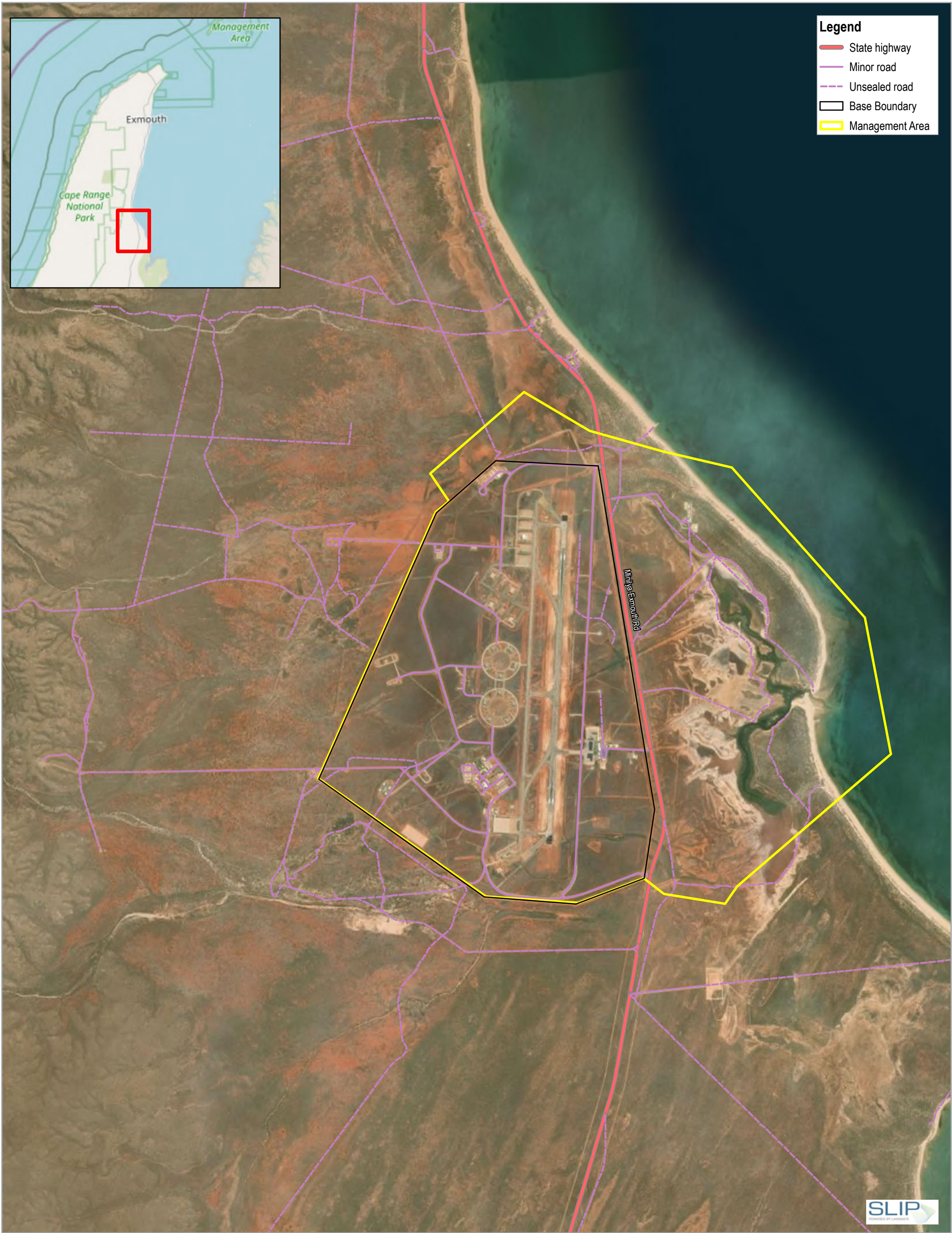
The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

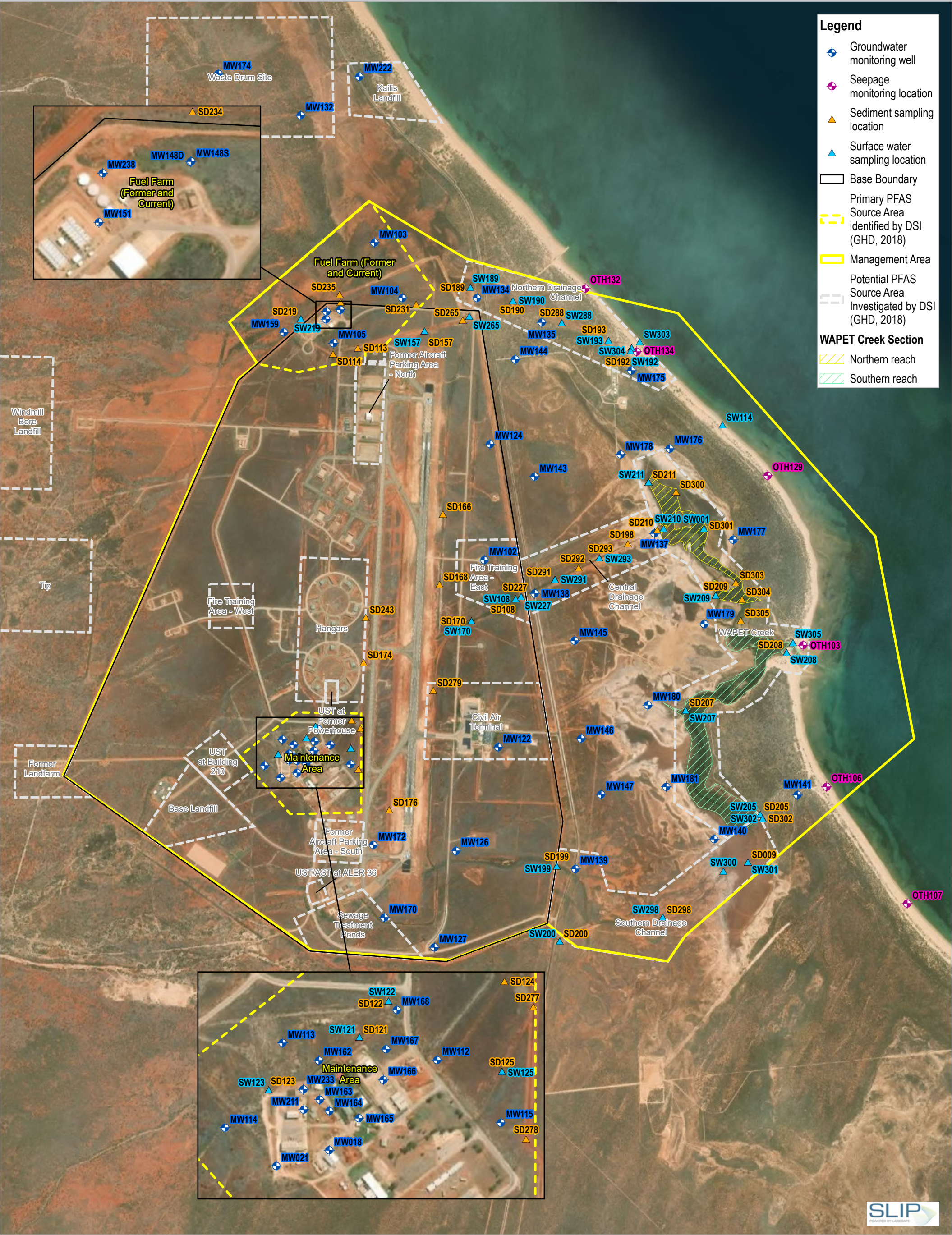
GHD has prepared this report on the basis of information provided by Department of Defence and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

Appendix A

Figures

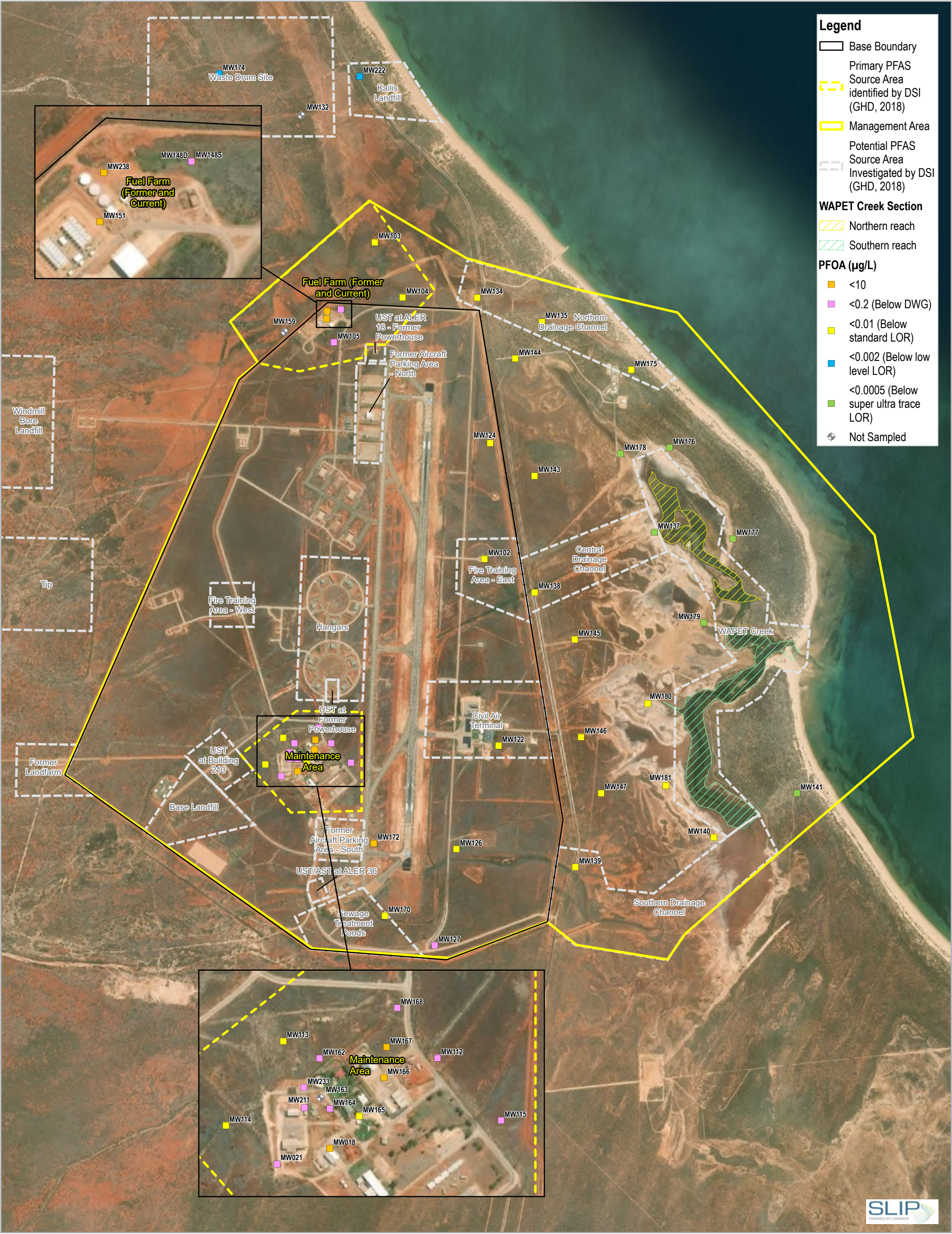


















Appendix B

Data validation

Appendix B

RAAF Base Learmonth– December 2024 QA/QC Evaluation

The QA and QC procedures were undertaken in accordance with the ASC NEPM and the Assessment and management of contaminated sites (DWER, 2021).

QA involves all the actions, procedures, checks and decisions undertaken to ensure the representativeness and integrity of samples and the accuracy and reliability of analytical results (NEPC, 2013). QC involves protocols to monitor and measure the effectiveness of QA procedures.

B-1 Fieldwork Program

Field QA/QC procedures and compliance during the investigation are summarised in Table 1 below, with exceptions detailed in the following subsections.

Table 1 Summary of field work QA/QC compliance

QA/QC element	Requirement	Requirement adhered to?	Information / data acceptable?
Sampling methods	All sampling methods outlined in the RAAF Base Learmonth OMP SAQP (GHD 2025) were adhered to.	Yes	Yes
Record keeping	Detailed records of field activities were maintained with the use of electronic or paper field sheets and quality control sample registers.	Yes	Yes, see Appendix F
CoC documentation	The CoC documentation was completed for each batch of samples, identifying the names of the samplers, the type of sample, the collection date, the analyses to be performed, sample preservation methods, and time the samples were relinquished to the courier.	Yes	Yes, see Appendix E
Sample labelling	Samples were properly labelled, showing reference number, sample ID, date of collection, sampler name and preservation techniques.	Yes	Yes
Sample containers	Samples were collected in appropriate laboratory supplied containers with suitable preservation methods (where required).	Yes	Yes
Sample storage and transport	Samples were stored in a chilled esky immediately after sampling prior to submission to the laboratory. Samples were kept in a chilled esky during delivery with CoC documentation. Samples were received at the laboratory at the recommended temperature (4 °C).	Yes, with exceptions	Yes, see Section B-1.1.
Decontamination	Reusable field equipment (e.g. interface meter) were appropriately decontaminated using Liquinox between each sampling location.	Yes	Yes
Rinsate blanks	Rinsate samples were collected by the sampler on each day following decontamination of reusable sampling equipment. Analysis of rinsate blanks reported concentrations below laboratory LOR indicating equipment was decontaminated appropriately.	Yes	Yes, see Section B-1.2.
Field blanks	Field blanks were collected by the sampler on each day to estimate potential contamination of a sample during the collection procedure. Analysis of field blanks reported concentrations below laboratory LOR	Yes	Yes, see Section B-1.2.

QA/QC element	Requirement	Requirement adhered to?	Information / data acceptable?
	indicating no cross contamination occurred as a result of ambient conditions during sampling.		
Duplicate samples	Blind and split duplicate samples were collected for analysis by the primary and secondary laboratories, respectively (at a frequency of at least one pair per 10 primary samples). RPDs calculated for the duplicate samples were at or below 30%.	Yes, with exceptions	Yes, see Section B-1.3.

B-1.1 Sample containers, storage and transport

All samples were collected in appropriate laboratory supplied containers with suitable preservation methods (where applicable).

To aid sample integrity, all samples were promptly placed into a chilled esky (with double bagged ice) following collection. Eskies were delivered to the primary laboratory (ALS Environmental) and secondary laboratory (Eurofins) as soon as practicable via courier.

As summarised in Table 2, the sample receipts from primary and secondary laboratories noted the samples were higher than the recommended temperature (4 °C). However, these receipts also noted an attempt to chill the samples and therefore it is considered that reasonable attempt to maintain the recommended sample temperature was made. It is noted that the significant distance of the base from the laboratories (i.e., approximately 1,250 km) is limiting upon the maintenance of low sample temperatures.

Table 2 Summary of sample temperatures

Lab report number	Temperature (°C)	Earliest Sample Date	Lab Received Date	Comments
EP2418971	22.1	10/12/2024	17/12/2024	"Ice present"
EP2419087	22.3	13/12/2024	19/12/2024	"Ice bricks present"##
EP2500078	7.3	17/12/2024	06/01/2025	"Ice present"
EP2500743	20.2	16/01/2025	20/01/2025	"Ice present"
1173732	16	10/12/2024	20/12/2025	"Attempt to chill was evident"
1179640	17	16/01/2025	21/01/2025	"Attempt to chill was evident"

Notes: # - ice bricks were placed in plastic bags to prevent cross contamination.

B-1.2 Quality assurance – blank samples

The groundwater QA samples collected during this sampling event were:

- **Rinsate blanks:** Rinsate blank samples are water samples collected from decontaminated, reused field equipment and were used primarily to assess whether the decontamination procedure was effective and if cross contamination has led to positive observations in subsequent samples. Rinsate samples were collected by pouring laboratory supplied rinsate water over reusable sampling equipment (e.g. interface probe) and collecting it in laboratory supplied containers. Rinsate samples were then transferred to a chilled cooler for sample preservation prior to and during transport to the testing laboratory.
- **Field blanks:** Field blank samples were used to estimate contamination of a sample during the collection procedure. Field blank samples were collected by pouring laboratory supplied rinsate water into laboratory supplied bottles onsite and sent to the laboratory for analysis along with other samples.

The blank samples collected and analysed as part of the quality assurance program are summarised in Table 3. The LOR applied to blank samples (i.e., standard or non-standard) reflected that that being applied to primary samples on the day of blank sample collected. All PFAS concentrations for the transport, field, and rinsate blanks were below the laboratory LOR as summarised in Table 3. The tabulated blank sample results are shown in Table QC.1 in Attachment 1.

Table 3 Summary of rinsate and field blanks

Lab report number	Sample type	Sample ID	Below LOR
EP2418971	Rinsate	0960_QC301_241209	Yes
		0960_QC302_241210	Yes
		0960_QC303_241212	Yes
		0960_QC304_241212	Yes
EP2419087		0960_QC305_241213	Yes
		0960_QC306_241214	Yes
		0960_QC307_241215	Yes
		0960_QC308_241216	Yes
		0960_QC309_241217	Yes
EP2500743		0960_QC310_250116	Yes
EP2418971	Field blank	0960_QC401_241209	Yes
		0960_QC402_241210	Yes
		0960_QC403_241211	Yes
		0960_QC404_241212	Yes
EP2419087		0960_QC405_241213	Yes
		0960_QC406_241214	Yes
		0960_QC407_241215	Yes
		0960_QC408_241216	Yes
		0960_QC409-241217	Yes
EP2500743		0960_QC410_250116	Yes

B-1.3 Quality control – duplicate samples

The QC samples collected during the investigation were:

- **Blind duplicates:** Blind duplicate samples were used to identify the variation in the analyte concentration between samples from the same sampling point and the repeatability of the laboratory's analysis.
- **Split duplicates:** Split duplicate samples were used to provide an indication of the repeatability of the results between laboratories.

Field duplicate samples (blind and split) were collected in replicate bottles during sampling. The required analyses were performed by ALS Laboratory group (primary laboratory) and Eurofins (secondary laboratory), both of whom are NATA accredited.

B-1.3.1 Sample collection frequency

Based on the OMP (GHD 2019), one pair of duplicates (blind and split) was required to be collected and analysed per 10 primary PFAS samples. The frequency of groundwater duplicates collected for this assessment is summarised in Table 4 .

Table 4 Summary of Sample collection frequency

Matrix	Rate	Expected number of duplicate pairs	Number of blind duplicate samples collected	Number of slit duplicate samples collected
Water	1 duplicate pair per 10 primary samples	10 (90 primary samples total taken)	12	12

Matrix	Rate	Expected number of duplicate pairs	Number of blind duplicate samples collected	Number of slit duplicate samples collected
Sediment	1 duplicate pair per 10 primary samples	5(49 primary samples total taken)	5	5

B-1.3.2 Relative percentage difference calculations

RPD calculations are used to assess how closely primary, blind duplicate and split duplicate sample results match. RPDs are a quantitative measure of the accuracy of the analytical results and are calculated in accordance with the procedure described in AS 4482.1 – 2005 (Standards Australia 2005). According to AS 4482.1 – 2005, typical RPDs are expected to range between 30% and 50%; however, this may be higher for organics and for low concentrations of analytes.

RPD results were considered acceptable if they were less than or equal to 30%. The only exception to this was when concentrations within the primary and blind or split sample were less than ten times the laboratory LOR. In this case, a greater RPD value is considered acceptable.

Where a result is reported below the laboratory LOR for one of the paired samples, the sample was assigned a concentration equal to the LOR for RPD calculation purposes. This is based on the consideration that the chemical may be present at a concentration just below the laboratory LOR or not present at all (i.e. the concentration is zero). Where both results are reported below laboratory LOR, the RPD is not calculated.

Water RPDs

For the water monitoring (including groundwater, surface water and seepage water) a total of 777 RPDs were calculated, and two RPDs (i.e., 0.25%) exceeded the adopted (conservative) 30% RPD acceptable limit, where the primary and/or duplicate sample concentrations were greater than 10 times the laboratory LOR. 738 RPDs were expressed as zero as both the primary and duplicate sample concentrations were less than the laboratory LOR. A summary of these exceedances is provided in Table 5 and full calculations are provided in Table QC.2 in Attachment 1.

The RPD values greater than the adopted threshold of 30% (where the primary and/or duplicate sample concentrations were greater than 10 times the applied LOR) are considered to have limited impact on the overall data quality given the low proportion of outliers relative to the wider dataset and noting the reported concentrations in the duplicate pairs were within the same order of magnitude.

Table 5 Summary of water RPD exceedances

Primary & Duplicate Field IDs (type)	Analyte	RPD (%)	Primary Concentration	Duplicate Concentration	Concentrations less than 10 x the LOR?
0960_MW177B_241215/ 0960_QC110_241215 (blind duplicate)	PFOS	40	0.0009	0.0006	Yes
	Perfluoropentanoic acid (PFPeA)	95	0.0014	<0.0005	Yes
0960_MW177B_241215/ 0960_QC210_241215 (split duplicate)	PFOS	160	0.0009	<0.0001	Yes
	PFPeA	33	0.0014	<0.001	Yes
	PFOS+PFHxS	62	0.0019	<0.001	Yes
0960_MW137B_241216/ 0960_QC113_241216 (blind duplicate)	PFOS	32	0.0029	0.0021	No
0960_MW137B_241216/ 0960_QC213_241216 (split duplicate)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	150	<0.001	0.007	Yes
	PFAS (sum of total)	92	0.0042	0.0113	No

Sediment RPDs

For the sediment monitoring, a total of 320 RPDs were calculated, and five RPDs exceeded the adopted (conservative) 30% RPD acceptable limit, where the primary and/or duplicate sample concentrations were greater than 10 times the laboratory LOR. 295 RPDs were expressed as zero as both the primary and duplicate sample concentrations were less than the laboratory LOR. A summary of these exceedances is presented in Table 6 and full calculations are provided in Table QC.3 in Attachment 1.

The RPD values greater than the adopted threshold of 30% (where the primary and/or duplicate sample concentrations were greater than 10 times the applied LOR) are considered to have limited impact on the overall data quality given the low proportion of outliers relative to the wider dataset and noting the reported concentrations in the duplicate pairs were within the same order of magnitude.

Table 6 Summary of sediment RPD exceedances

Primary & Duplicate Field IDs (type)	Analyte	RPD (%)	Primary Concentration	Duplicate Concentration	Concentrations less than 10 x the LOR?
0960_SD123_241210/ 0960_QC101_241210 (blind duplicate)	Perfluorodecanesulfonic acid (PFDS)	86	0.0006	0.0015	Yes
	Perfluorononane sulfonate (PFNS)	148	0.0003	0.002	Yes
	PFOS	65	0.0170	0.0333	No
	Perfluorohexanoic acid (PFHxA)	40	0.0003	0.0002	Yes
	PFAS (sum of total)	63	0.0185	0.0356	No
	PFOS+PFHxS	63	0.0176	0.0339	No
0960_SD243_241211/ 0960_QC203_241211 (split duplicate)	PFOS	50	0.0115	0.0069	No
	PFOS+PFHxS	50	0.0115	0.0069	No

B-2 Laboratory program

Laboratory QA/QC procedures and compliance during the investigation are summarised in Table 7, with exceptions detailed in the following subsections.

Table 7 Summary of Laboratory QA/QC compliance

QA/QC element	Requirement	Requirement adhered to?	Information/data acceptable?
NATA accreditation	Analysis of CoPC performed under NATA accreditation or equivalent government endorsed provider of accreditation.	Yes	Yes
Holding times	Laboratory to complete sample extraction and analysis of CoPC within method specifications.	Yes, with exceptions	Yes, see Section B-2.3.5.
Analytical methods	Sample analyses are to use appropriate methods for each CoPC with regard to Schedule B (3) of the ASC NEPM and in accordance with the laboratory's NATA accreditation.	Yes	Yes
Laboratory LORs	Laboratory LORs are below adopted assessment criteria.	Partially, as per SAQP	Yes
Laboratory QC results	No method blank, laboratory duplicates, laboratory controls, matrix spike or surrogate spike recovery outliers were identified. Sufficient quantities of laboratory QC analysis was undertaken.	Yes, with exceptions	Yes, see Section B.2-3.

B-2.1 Laboratory quality control procedures

Laboratory QC samples incorporated in the analytical process included:

- **Laboratory blind duplicates:** A laboratory blind duplicate provides data on the analytical precision and reproducibility of the analytical result. The laboratory blind duplicate is created by subsampling from one of the primary samples submitted for analysis. Laboratory blind duplicates are analysed at a rate equivalent to one in ten per analytical batch, or one sample per batch if less than 10 samples are analysed in a batch.
- **LCS:** The LCS analysis of either a reference material or a control matrix fortified with analytes representative of the analyte class. The purpose of LCS is to monitor method precision and accuracy independent of the sample matrix. Typically, the percentage recovery of the LCS is compared to the dynamic recovery limit based on the statistical analysis of the processed LCS analysis.
- **Matrix spikes:** Matrix spike sample analysis is the analysis of one or more replicate portions of samples from the batch, after fortifying the additional portion(s) with known quantities of the analyte(s) of interest. The percentage recovery of target analyte(s) from matrix spike samples is used to determine the bias of the method in the specific sample matrix.
- **Surrogate spikes:** Surrogate spikes provide a means of checking that no gross errors have occurred during any stage of the analytical method leading to significant analyte loss. Surrogate recoveries are similar to the analyte of interest in terms of chemical composition, extractability, and chromatographic conditions (retention time), but which are not normally found in environmental samples. Surrogate compounds are spiked into blanks, standards and samples submitted for organic analyses by gas-chromatographic techniques prior to sample extraction.
- **Method blanks:** Method or analysis blank sample analysis is the analysis of a sample that is as free as possible of the analytes of interest but has been prepared the same as the samples under investigation. The analysis is to ascertain if laboratory reagents, glassware and other laboratory consumables contribute to the observed concentration of analytes in the process batch. If below the maximum acceptable method blank (20% of the practical quantisation limit), the contribution is subtracted from the gross analytical signal for each analysis before calculating the sample analyte concentration. The method blank should return analyte concentrations as 'not detected'.

B-2.2 Laboratory quality control results

Laboratory quality control results were compared against criteria set by ALS Environmental and Eurofins, which are largely based on the ASC NEPM and US EPA (2006) methods. The individual testing laboratories conducted an assessment of the laboratory QC program internally; however, the results were also independently reviewed and assessed by GHD. All laboratory quality control measures were within the adopted acceptance criteria with the exception of those described in the subsections below.

The exceptions were limited and comprised a very small proportion of the large number of quality control measures completed for the investigation. Based on this, the exceptions described in the subsections below are not considered to significantly influence data quality.

B-2.3 QC sample frequency – outliers

All laboratory QC samples were tested with the expected frequency, except those summarised in Table 8. It is noted that reported PFAS concentrations in the primary samples were generally consistent with the historical dataset, indicating that an acceptable degree of laboratory accuracy was obtained, despite the reduced frequency of QC sample testing implemented. On this basis, these non-compliances are not considered to have materially affected the data quality.

Table 8 QC sample frequency – outliers

Lab Report	QC sample type	Analytical Method	Method	Actual rate/expected rate (%)
EP2418971 (water)	Laboratory duplicates	PFAS by liquid chromatography–mass spectrometry.	EP231X	3.45/10

Lab Report	QC sample type	Analytical Method	Method	Actual rate/expected rate (%)
EP2419087 (water)	Matrix spikes	PFAS by liquid chromatography–mass spectrometry.	EP231X	1.72/5
	Laboratory duplicates	PFAS by liquid chromatography–mass spectrometry.	EP231X-LL	0/10
		PFAS by liquid chromatography–mass spectrometry.	EP231X	4.55/10
		PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	2.17/10
	Matrix spikes	PFAS by liquid chromatography–mass spectrometry.	EP231X-LL	0/10
		PFAS by liquid chromatography–mass spectrometry.	EP231X	2.27/10
		PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	0/10
EP2500078 (water)	Laboratory duplicates	PFAS by liquid chromatography–mass spectrometry.	EP231X	0/10
		PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	0/10
	Matrix spikes	PFAS by liquid chromatography–mass spectrometry.	EP231X	0/5
		PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	0/5
EP2500743 (water)	Laboratory duplicates	PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	5/10

B-2.3.1 Matrix spike – outliers

All matrix spikes were of an acceptable recovery except for those summarised in Table 9. These outliers only represent a small portion of the internal lab QC program conducted and, in most cases, relate to anonymous samples (i.e., samples unrelated to the base or project). Therefore, these minor non-compliances are not considered to have materially affected the data quality.

Table 9 *Matrix spike outliers*

Lab Report	Sample ID	Analyte	Comment
EP2418971 (sediment)	Anonymous	Perfluorooctane sulfonamide (FOSA)	Recovery greater than upper data quality objective
	Anonymous	N-Methyl perfluorooctane sulfonamide (MeFOSA)	Recovery greater than upper data quality objective
	Anonymous	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	Recovery greater than upper data quality objective
EP2418971 (water)	Anonymous	Perfluorobutanoic acid (PFBA)	Recovery greater than upper data quality objective
	Anonymous	PFPeA	Recovery less than lower data quality objective
	Anonymous	Perfluorohexanoic acid (PFHxA)	Recovery less than lower data quality objective
	Anonymous	Perfluoroheptanoic acid (PFHpA)	Recovery less than lower data quality objective
EP2419087 (sediment)	0960_SD189_241 214	Perfluoroundecanoic acid (PFUnDA)	Recovery greater than upper data quality objective

Lab Report	Sample ID	Analyte	Comment
	0960_SD189_241 214	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Recovery greater than upper data quality objective
	0960_SD189_241 214	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Recovery greater than upper data quality objective

B-2.3.2 Laboratory control spike – outliers

All laboratory control spike outliers were of an acceptable recovery except for those summarised in Table 10. These outliers only represent a small portion of the internal lab QC program conducted and, in all cases, relate to anonymous samples (i.e., samples unrelated to the base or project). Therefore, these minor non-compliances are not considered to have materially affected the data quality.

Table 10 *Laboratory control spike outliers*

Lab Report	Sample ID	Analyte	Comment
EP2418971 (water)	Anonymous	MeFOSA	Recovery greater than upper control limit
	Anonymous	MeFOSA	Recovery greater than upper control limit
EP2419087 (sediment)	Anonymous	10:2 FTS	Recovery greater than upper control limit
EP2419087 (water)	Anonymous	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	Recovery greater than upper control limit
	Anonymous	MeFOSA	Recovery less than lower control limit
	Anonymous	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	Recovery less than lower control limit
	Anonymous	10:2 FTS	Recovery greater than upper control limit
	Anonymous	8:2 FTS	Recovery greater than upper control limit
	Anonymous	10:2 FTS	Recovery greater than upper control limit

B-2.3.3 Surrogate recovery – outliers

All surrogate recovery outliers were of an acceptable recovery. No surrogate recovery outliers exist within the sampling event.

B-2.3.4 Duplicate – outliers

Samples were analysed and received acceptable RPDs with no outliers.

B-2.3.5 Holding time – outliers

Samples were analysed within appropriate holding times, excluding some non-PFAS analytes such as moisture content. These holding time breaches are not considered to significantly impact the overall data quality as they do not relate to analytes that are critical to the project objectives.

B-3 Data quality indicator evaluation

Table 11 Data quality indicator evaluation

		Acceptable?
Completeness	All locations that were proposed to be sampled were sampled where possible. Samples were analysed according to the OMP (GHD 2019).	Yes
	All field documentation is complete and correct, including chain of custody documentation for samples.	Yes
	Field forms and documentation capture all relevant important information.	Yes
	Samples were analysed within appropriate holding times.	Yes
	Appropriate laboratory limits of reporting for comparison to relevant assessment criteria.	Yes
Comparability	Standardised operating procedure for groundwater sampling was adhered to and is in line with relevant guidelines.	Yes
	Field staff were experienced in the sampling of groundwater and were appropriately trained.	Yes
	Consistent laboratory use with consistent analytical methods used.	Yes
	Climatic conditions consistent and considered representative of region.	Yes
Representativeness	Samples were collected in a uniform and consistent manner, therefore representative of the media in the field.	Yes
Precision	Sufficient quantities of field blind and split duplicates were collected to enable comparison within and between laboratories.	Yes
	Sufficient quantities of internal laboratory duplicates were analysed to enable comparison within laboratories.	Yes
	Relative percentage difference calculations show that a large majority of duplicate sample concentrations are within defined difference limits.	Yes
	Field equipment was calibrated by equipment supplier (Appendix G6).	Yes
Accuracy	Sufficient quantities of field blanks, rinsate blanks and transport blanks were collected and analysed, with no results indicating cross contamination.	Yes
	Sufficient quantities of internal laboratory method blanks, surrogate spikes and laboratory control samples were analysed to determine laboratory accuracy, with the large majority of samples within defined limits.	Yes

Based on the results of the evaluation of the QA/QC data described in the previous sections, the reported QA/QC non-compliances are not considered likely to significantly influence the reliability of the analytical data. It is further considered that:

- The field and laboratory quality assurance measures implemented provide a reasonable level of confidence that the data collected and reported is appropriately complete, comparable and representative.
- The field and laboratory quality control measures implemented provide a reasonable level of confidence that the data collected and reported is appropriately accurate and precise.
- The overall review of the QA/QC results indicates that the data collected for the investigation is of acceptable quality upon which to provide an adequate and reliable assessment of the property.

Attachment 1 – QA/QC Data Tables

Table QC.1	Blank results
Table QC.2	Relative Percentage Differences – Water
Table QC.3	Relative Percentage Differences – Sediment



	Sample Type		Rinsate									
			0960_QC301_24	0960_QC302_24	0960_QC303_24	0960_QC304_24	0960_QC305_24	0960_QC306_24	0960_QC307_24	0960_QC308_24	0960_QC309_24	0960_QC310_25
	Field ID		1209	1210	1212	1212	1213	1214	1215	1216	1217	0116
	Sample Date		09 Dec 2024	10 Dec 2024	11 Dec 2024	12 Dec 2024	13 Dec 2024	14 Dec 2024	15 Dec 2024	16 Dec 2024	17 Dec 2024	16 Jan 2025
	Lab Report		EP2418971	EP2418971	EP2418971	EP2418971	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	EP2500743
Analyte	Unit	LOR										
PFAS - Perfluoroalkyl Sulfonic Acids												
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	<0.002	<0.0002
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	<0.002	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids												
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	<0.01	<0.01	<0.01	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	<0.002	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.0005
Perfluorotridecanoic acid (PFTTrDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	<0.005	-	<0.005	<0.005	<0.005	-
PFAS - Perfluoroalkyl Sulfonamide												
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.002	<0.02	<0.002	<0.002	<0.002	<0.0005
PFAS - Fluorotelomer Sulfonic Acids												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
PFAS - Sums												
PFAS (Sum of Total)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	<0.002	<0.0002
PFAS (Sum of Total)(WA DER List)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	<0.002	<0.0002
Sum of PFHxS and PFOS	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	<0.002	<0.0002



Sample Type			Field Blank									
Field ID			0960_QC401_24	0960_QC402_24	0960_QC403_24	0960_QC404_24	0960_QC405_24	0960_QC406_24	0960_QC407_24	0960_QC408_24	0960_QC409-24	0960_QC410_25
Sample Date			1209	1210	1211	1212	1213	1214	1215	1216	241217	0116
Lab Report			09 Dec 2024	10 Dec 2024	11 Dec 2024	12 Dec 2024	13 Dec 2024	14 Dec 2024	15 Dec 2024	16 Dec 2024	17 Dec 2024	16 Jan 2025
Lab Report			EP2418971	EP2418971	EP2418971	EP2418971	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	EP2500743
Analyte	Unit	LOR										
PFAS - Perfluoroalkyl Sulfonic Acids												
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.0002
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids												
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	<0.005	<0.005	<0.005	-
PFAS - Perfluoroalkyl Sulfonamide												
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002	<0.002	<0.0005
PFAS - Fluorotelomer Sulfonic Acids												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.001
PFAS - Sums												
PFAS (Sum of Total)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.0002
PFAS (Sum of Total)(WA DER List)	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.0002
Sum of PFHxS and PFOS	µg/L	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.0002



Analyte	Location ID		0960_MW126	0960_MW126	RPD %	0960_MW126	0960_MW126	RPD %	0960_MW166	0960_MW166	RPD %	0960_MW166	0960_MW166	RPD %	0960_MW229	0960_MW229	RPD %	0960_MW229	0960_MW229	RPD %	0960_MW122	0960_MW122	RPD %
	Sample Date		12 Dec 2024	12 Dec 2024		12 Dec 2024	12 Dec 2024		12 Dec 2024	12 Dec 2024		12 Dec 2024	12 Dec 2024		13 Dec 2024	13 Dec 2024		13 Dec 2024	13 Dec 2024		13 Dec 2024	13 Dec 2024	
	Field ID		0960_MW126_2	0960_QC104_2		0960_MW126_2	0960_QC204_2		0960_MW166_2	0960_QC105_2		0960_MW166_2	0960_QC205_2		0960_MW229_2	0960_QC106_2		0960_MW229_2	0960_QC206_2		0960_MW122_2	0960_QC107_2	
	Sample Type		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate	
	Lab Report		EP2418971	EP2418971		EP2418971	1173732		EP2418971	EP2418971		EP2418971	1173732		EP2419087	EP2419087		EP2419087	1173732		EP2419087	EP2419087	
Matrix Type			Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water	
Unit	LOR																						
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	0.06	0.07	15	0.06	0.05	18	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorononane sulfonate (PFNS)	µg/L	0.001	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	-	-	-	-	<0.01	-	<0.02	<0.02	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	<0.01	<0.01	0	<0.01	<0.01	0	0.21	0.23	9	0.21	0.23 ^{#1}	9	<0.002	<0.002	0	<0.002	<0.01	0	<0.01	<0.01	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	0.02	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.02	<0.02	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	0.04	0.04	0	0.04	0.03 ^{#1}	29	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005	<0.01	<0.01	0	<0.01	<0.01	0	0.28	0.28	0	0.28	0.26 ^{#1}	7	<0.002	<0.002	0	<0.002	<0.01	0	<0.01	<0.01	0
PFAS - Perfluoroalkyl Carboxylic Acids																							
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.1	0	<0.1	<0.05	0	0.2	0.2	0	0.2	0.16	22	<0.01	<0.01	0	<0.01	<0.05	0	<0.1	<0.1	0
Perfluorodecanoic acid (PFDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	0.30	0.32	6	0.30	0.30 ^{#1}	0	<0.002	<0.002	0	<0.002	<0.05	0	<0.02	<0.02	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	0.28	0.33	16	0.28	0.29	4	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorononanoic acid (PFNA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	<0.01	<0.01	0	<0.01	<0.01	0	0.22	0.21	5	0.22	0.21 ^{#1}	5	<0.002	<0.002	0	<0.002	<0.01	0	<0.01	<0.01	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	0.37	0.37	0	0.37	0.32	14	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.005	<0.005	0	<0.005	<0.01	0	<0.05	<0.05	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.02	<0.02	0
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	0	<0.005	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																							
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.005	<0.005	0	<0.005	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.002	<0.002	0	<0.002	<0.05	0	<0.02	<0.02	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.005	<0.005	0	<0.005	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.005	<0.005	0	<0.005	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.002	<0.002	0	<0.002	<0.05	0	<0.02	<0.02	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.005	<0.005	0	<0.005	<0.05	0	<0.05	<0.05	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.002	<0.002	0	<0.002	<0.05	0	<0.02	<0.02	0
PFAS - Fluorotelomer Sulfonic Acids																							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.005	<0.005	0	<0.005	<0.01	0	<0.05	<0.05	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.005	<0.005	0	<0.005	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.005	<0.005	0	<0.005	<0.01	0	<0.05	<0.05	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.005	<0.005	0	<0.005	<0.01	0	<0.05	<0.05	0
PFAS - Sums																							
PFAS (Sum of Total)	µg/L	0.0002	<0.01	<0.01	0	<0.01	<0.1	0	1.96	2.05	4	1.96	1.88	4	<0.002	<0.002	0	<0.002	<0.1	0	<0.01	<0.01	0
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002	<0.01	<0.01	0	<0.01	<0.05	0	1.92	2.01	5	1.92	1.82	5	<0.002	<0.002	0	<0.002	<0.05	0	<0.01	<0.01	0
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001	-	-	-	-	<0.01	-	-	-	-	-	0.44	-	-	-	-	-	<0.01	-	-	-	-
Sum of PFHxS and PFOS	µg/L	0.0002	<0.01	<0.01	0	<0.01	<0.01	0	0.49	0.51	4	0.49	0.49	0	<0.002	<0.002	0	<0.002	<0.01	0	<0.01	<0.01	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001	-	-	-	-	<0.01	-	-	-	-	-	0.7	-	-	-	-	-	<0.01	-	-	-	-

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

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))

***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



Analyte	Location ID		0960_MW122	0960_MW122	RPD %	0960_OTH103	0960_OTH103	RPD %	0960_OTH103	0960_OTH103	RPD %	0960_MW177	0960_MW177	RPD %	0960_MW177	0960_MW177	RPD %	0960_SW300	0960_SW300	RPD %	0960_SW300	0960_SW300	RPD %			
	Sample Date		13 Dec 2024	13 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024	15 Dec 2024
	Field ID		0960_MW122_2	0960_QC207_2		0960_OTH103_2	0960_QC109_2		0960_OTH103_2	0960_QC209_2		0960_MW177B_2	0960_QC110_2		0960_MW177B_2	0960_QC210_2		0960_SW300_2	0960_QC112_2		0960_SW300_2	0960_QC212_2				
	Sample Type		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate				
	Lab Report		EP2419087	1173732		EP2419087	EP2419087		EP2419087	1173732		EP2419087	EP2419087		EP2419087	1173732		EP2419087	EP2419087		EP2419087	1173732				
Matrix Type		Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water				
Unit	LOR																									
PFAS - Perfluoroalkyl Sulfonic Acids																										
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorononane sulfonate (PFNS)	µg/L	0.001	<0.02	<0.01	0	-	-	-	-	<0.001	-	-	-	-	-	<0.001	-	-	<0.02	-	-	<0.01	-			
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	<0.01	<0.01	0	0.0002	0.0002	0	0.0002	0.0001	67	0.0009	0.0006	40	0.0009	<0.0001	160	<0.002	<0.01	0	<0.002	<0.01	0			
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001	<0.02	<0.01	0	<0.0020	<0.0020	0	<0.0020	<0.001	0	<0.0020	<0.0020	0	<0.0020	<0.001	0	<0.01	<0.02	0	<0.01	<0.01	0			
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005	<0.01	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	0.0010	0.0009	11	0.0010	<0.001	0	<0.002	<0.01	0	<0.002	<0.01	0			
PFAS - Perfluoroalkyl Carboxylic Acids																										
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.05	0	<0.0020	<0.0020	0	<0.0020	<0.005	0	<0.0020	0.0026	26	<0.0020	<0.005	0	<0.01	<0.1	0	<0.01	<0.05	0			
Perfluorodecanoic acid (PFDA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.002	<0.02	0	<0.002	<0.05	0			
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorononanoic acid (PFNA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	<0.01	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.01	0	<0.002	<0.01	0			
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	0.0014	<0.0005	95	0.0014	<0.001	33	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005	<0.05	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.005	<0.05	0	<0.005	<0.01	0			
Perfluorotridecanoic acid (PFTriDA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.002	<0.02	0	<0.002	<0.01	0			
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.005	-	-			
PFAS - Perfluoroalkyl Sulfonamide																										
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.005	<0.05	0	<0.005	<0.05	0			
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.002	<0.02	0	<0.002	<0.05	0			
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.005	<0.05	0	<0.005	<0.05	0			
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.005	<0.05	0	<0.005	<0.05	0			
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.002	<0.02	0	<0.002	<0.05	0			
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.005	<0.05	0	<0.005	<0.05	0			
Perfluorooctane sulfonamide (FOSA)	µg/L	0.0005	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.002	<0.02	0	<0.002	<0.05	0			
PFAS - Fluorotelomer Sulfonic Acids																										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.01	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.005	<0.05	0	<0.005	<0.01	0			
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.005	<0.05	0	<0.005	<0.05	0			
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.05	<0.01	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.005	<0.05	0	<0.005	<0.01	0			
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.05	<0.01	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.005	<0.05	0	<0.005	<0.01	0			
PFAS - Sums																										
PFAS (Sum of Total)	µg/L	0.0002	<0.01	<0.1	0	0.0002	0.0002	0	0.0002	-	-	0.0033	0.0041	22	0.0033	-	-	<0.002	<0.01	0	<0.002	<0.1	0			
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002	<0.01	<0.05	0	0.0002	0.0002	0	0.0002	<0.005	0	0.0033	0.0041	22	0.0033	<0.005	0	<0.002	<0.01	0	<0.002	<0.05	0			
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001	-	<0.01	-	-	-	-	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	<0.01	-			
Sum of PFHxS and PFOS	µg/L	0.0002	<0.01	<0.01	0	0.0002	0.0002	0	0.0002	<0.001	0	0.0019	0.0015	24	0.0019	<0.001	62	<0.002	<0.01	0	<0.002	<0.01	0			
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001	-	<0.01	-	-	-	-	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	<0.01	-			

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

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))

***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



Analyte	Location ID		0960_MW137	0960_MW137	RPD %	0960_MW137	0960_MW137	RPD %	0960_MW178	0960_MW178	RPD %	0960_MW178	0960_MW178	RPD %	0960_MW180	0960_MW180	RPD %	0960_MW180	0960_MW180	RPD %	0960_MW181	0960_MW181	RPD %						
	Sample Date		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024		16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024
	Field ID		0960_MW137B_241216	0960_QC113_2 41216		0960_MW137B_241216	0960_QC213_2 41216		0960_MW178B_241216	0960_QC114_2 41216		0960_MW178B_241216	0960_QC214_2 41216		0960_MW180A_250116	60_QC115_250116		0960_MW180A_250116	60_QC115_250116		0960_MW180A_250116	60_QC115_250116		0960_MW180A_250116	60_QC115_250116	0960_MW180A_250116	60_QC115_250116	0960_MW181A_250116	0960_QC116_2 50116
	Sample Type		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate	Primary	Blind Duplicate	Primary	Blind Duplicate
	Lab Report		EP2419087	EP2419087		EP2419087	1173732		EP2419087	EP2419087		EP2419087	EP2419087		EP2419087	EP2419087		EP2419087	EP2419087		EP2419087	EP2419087		EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087
Matrix Type		Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water							
Unit	LOR																												
PFAS - Perfluoroalkyl Sulfonic Acids																													
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorononane sulfonate (PFNS)	µg/L	0.001	-	-	-	-	<0.001	-	-	-	-	-	<0.001	-	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	0.0029	0.0021	32	0.0029	0.0033	13	<0.0002	<0.0002	0	<0.0002	0.0001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0						
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001	<0.0020	<0.0020	0	<0.0020	<0.001	0	<0.0020	<0.0020	0	<0.0020	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005	0.0013	0.0012	8	0.0013	0.001#1	26	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0						
PFAS - Perfluoroalkyl Carboxylic Acids																													
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.0020	<0.0020	0	<0.0020	<0.005	0	<0.0020	<0.0020	0	<0.0020	<0.005	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0						
Perfluorodecanoic acid (PFDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0						
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorononanoic acid (PFNA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0						
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0						
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0						
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
PFAS - Perfluoroalkyl Sulfonamide																													
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0						
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0						
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0						
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0						
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0						
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0						
Perfluorooctane sulfonamide (FOSA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0						
PFAS - Fluorotelomer Sulfonic Acids																													
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0						
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	0.007	150	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0						
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0						
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.05	<0.05	0						
PFAS - Sums																													
PFAS (Sum of Total)	µg/L	0.0002	0.0042	0.0033	24	0.0042	-	-	<0.0002	<0.0002	0	<0.0002	-	-	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0						
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002	0.0042	0.0033	24	0.0042	0.0113	92	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.01	<0.01	0	<0.01	<0.05	0	<0.01	<0.01	0						
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001	-	-	-	-	0.0033	-	-	-	-	-	<0.001	-	-	-	-	-	<0.01	-	-	-	-						
Sum of PFHxS and PFOS	µg/L	0.0002	0.0042	0.0033	24	0.0042	0.0043	2	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0						
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001	-	-	-	-	0.0043	-	-	-	-	-	<0.001	-	-	-	-	<0.01	-	-	-	-	-						

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

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))

***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



Analyte	Location ID		0960_MW181	0960_MW181	RPD %	0960_MW140	0960_MW140	RPD %	0960_MW140	0960_MW140	RPD %
	Sample Date		16 Jan 2025	16 Jan 2025		16 Jan 2025	16 Jan 2025		16 Jan 2025	16 Jan 2025	
	Field ID		0960_MW181A	0960_QC216_2		0960_MW140A	0960_QC117_2		0960_MW140A	0960_QC217_2	
	Sample Type		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate	
	Lab Report		EP2500743	1179640		EP2500743	EP2500743		EP2500743	1179640	
	Matrix Type		Water	Water		Water	Water		Water	Water	
Unit	LOR										
PFAS - Perfluoroalkyl Sulfonic Acids											
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorononane sulfonate (PFNS)	µg/L	0.001	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
PFAS - Perfluoroalkyl Carboxylic Acids											
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Perfluorodecanoic acid (PFDA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorononanoic acid (PFNA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005	<0.02	<0.01	0	<0.02	<0.02	0	<0.02	<0.01	0
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide											
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Perfluorooctane sulfonamide (FOSA)	µg/L	0.0005	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0
PFAS - Fluorotelomer Sulfonic Acids											
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.05	<0.01	0	<0.05	<0.05	0	<0.05	<0.01	0
PFAS - Sums											
PFAS (Sum of Total)	µg/L	0.0002	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002	<0.01	<0.05	0	<0.01	<0.01	0	<0.01	<0.05	0
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001	-	<0.01	-	-	-	-	-	<0.01	-
Sum of PFHxS and PFOS	µg/L	0.0002	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001	-	<0.01	-	-	-	-	-	<0.01	-

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

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))

***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



Analyte	Location ID		0960_SD123	0960_SD123	RPD %	0960_SD123	0960_SD123	RPD %	0960_SD219	0960_SD219	RPD %	0960_SD219	0960_SD219	RPD %	0960_SD243	0960_SD243	RPD %	0960_SD243	0960_SD243	RPD %
	Sample Date	10 Dec 2024	10 Dec 2024	10 Dec 2024		10 Dec 2024	10 Dec 2024		10 Dec 2024	10 Dec 2024		10 Dec 2024	10 Dec 2024		11 Dec 2024	11 Dec 2024		11 Dec 2024	11 Dec 2024	
	Field ID	0960_SD123_	0960_QC101_	241210		241210	0960_SD219_		0960_QC102_	241210		241210	0960_SD243_		0960_QC103_	241211		241211		
	Sample Type	Primary	Blind Duplicate	Primary		Split Duplicate	Primary		Blind Duplicate	Primary		Split Duplicate	Primary		Blind Duplicate	Primary		Split Duplicate		
	Lab Report	EP2418971	EP2418971	EP2418971		1173732	EP2418971		EP2418971	EP2418971		1173732	EP2418971		EP2418971	EP2418971		1173732		
Matrix Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
PFAS - Perfluoroalkyl Sulfonic Acids																				
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	0.0006	0.0015	86	0.0006	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0.0002	0.0002	0	0.0002	<0.005	0
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	0.0003	0.0020	148	0.0003	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0.0003	0.0003	0	0.0003	<0.005	0
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0170	0.0333	65	0.0170	0.018 ^{#1}	6	0.0013	0.0011	17	0.0013	<0.005	0	0.0115	0.0109	5	0.0115	0.0069 ^{#1}	50
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	0.0006	0.0006	0	0.0006	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
PFAS - Perfluoroalkyl Carboxylic Acids																				
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorododecanoic acid (PFDDaDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	0.0003	0.0002	40	0.0003	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
PFAS - Perfluoroalkyl Sulfonamide																				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
PFAS - Fluorotelomer Sulfonic Acids																				
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.01	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
PFAS - Sums																				
PFAS (Sum of Total)	mg/kg	0.0002	0.0185	0.0356	63	0.0185	<0.05	0	0.0013	0.0011	17	0.0013	<0.05	0	0.0117	0.0111	5	0.0117	<0.05	0
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	0.0179	0.0341	62	0.0179	0.018	1	0.0013	0.0011	17	0.0013	<0.01	0	0.0115	0.0109	5	0.0115	<0.01	14
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	0.018	-	-	-	-	-	<0.005	-	-	-	-	-	0.0069	-
Sum of PFHxS and PFOS	mg/kg	0.0002	0.0176	0.0339	63	0.0176	0.018	2	0.0013	0.0011	17	0.0013	<0.005	0	0.0115	0.0109	5	0.0115	0.0069	50
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	0.018	-	-	-	-	-	<0.005	-	-	-	-	-	0.0069	-



Analyte	Location ID		0960_SD227	0960_SD227	RPD %	0960_SD227	0960_SD227	RPD %	0960_SD301	0960_SD301	RPD %	0960_SD301	0960_SD301	RPD %
	Sample Date		14 Dec 2024	14 Dec 2024		14 Dec 2024	14 Dec 2024		15 Dec 2024	15 Dec 2024		15 Dec 2024	15 Dec 2024	
	Field ID		241214	241214		241214	241214		241215	241215		241215	241215	
	Sample Type		Primary	Blind Duplicate		Primary	Split Duplicate		Primary	Blind Duplicate		Primary	Split Duplicate	
	Lab Report		EP2419087	EP2419087		EP2419087	1173732		EP2419087	EP2419087		EP2419087	1173732	
	Matrix Type		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
Unit	LOR													
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0003	0.0004	29	0.0003	<0.005	0	<0.0002	0.0002	0	<0.0002	<0.005	0
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
PFAS - Perfluoroalkyl Sulfonamide														
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0
PFAS - Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.01	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0
PFAS - Sums														
PFAS (Sum of Total)	mg/kg	0.0002	0.0003	0.0004	29	0.0003	<0.05	0	<0.0002	0.0002	0	<0.0002	<0.05	0
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	0.0003	0.0004	29	0.0003	<0.01	0	<0.0002	0.0002	0	<0.0002	<0.01	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-
Sum of PFHxS and PFOS	mg/kg	0.0002	0.0003	0.0004	29	0.0003	<0.005	0	<0.0002	0.0002	0	<0.0002	<0.005	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-

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

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))

***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 C

Results tables



			Well Data			Field data			Field Parameters						
			TOC Elevation	Groundwater Elevation	Screen interval	Total Well Depth	Standing Water Level	Sample Depth	pH (Field)	Electrical conductivity (field)	Dissolved Oxygen (Field)	Redox (Field)	Temperature (Field)		
m AHD		m bgl	m bTOC			pH units	µS/cm	mg/L	mV	°C					
Location Code	Date	Sampling Method												Sample Comment	
0960_MW018	12 Dec 2024	Hydrasleeve	6.403	0.606	5.5 - 8.5	8.045	5.797	7.5	7.71	3,083	2.67	-78.9	27.7	Clear, pale orange, no odour, no sheen, orange at bottom	
0960_MW021	12 Dec 2024	Hydrasleeve	6.745	0.61	5.6 - 8.6	7.295	6.135	7	7.63	4,731	2.09	-75.4	29.5	Colourless, clear, no odour, no sheen	
0960_MW102	12 Dec 2024	Hydrasleeve	4.627	-0.057	2.5 - 8.5	8.31	4.684	8	6.92	91,712	0.77	-81.2	30.7	Palte yellow, orange at bottom, low fine sediment, no odour, no sheen	
0960_MW103	13 Dec 2024	Hydrasleeve	2.2785	-0.1355	1 - 5.8	6	2.414	5	6.8	75,508	0.73	-75.3	31.3	Pale orange, moderate sediment load, orange at bottom, no odour, no sheen,	
0960_MW104	13 Dec 2024	Hydrasleeve	2.726	-0.044	1 - 6.5	6.107	2.77	5.5	7.03	79,841	1.01	-85.4	29.2	Colourless, no odour, no sheen, pale orange at bottom, low sediment load	
0960_MW105	13 Dec 2024	Hydrasleeve	3.727	0.092	2 - 8	7.744	3.635	7	6.8	44,934	0.6	-87.4	30.8	Pale yellow, slight to moderate turbidity, no odour, no sheen, low to moderate sediment load	
0960_MW112	12 Dec 2024	Hydrasleeve	5.119	0.474	3 - 8	6.957	4.645	6.5	7.24	11,160	3.1	-93.3	29	Colourless, no odour, no sheen, low to no sediment load, pale orange at bottom	
0960_MW113	12 Dec 2024	Hydrasleeve	7.316	0.621	4 - 10	10.295	6.695	10	6.87	10,507	2.07	-99.5	27.6	Clear, colourless, no odour, no sheen, no turbidity	
0960_MW114	12 Dec 2024	Hydrasleeve	7.747	-0.161	4 - 10	10.536	7.908	10	7.04	9,083	1.05	-80.9	29.1	Colourless, slight turbidity, no odour, no sheen, orange at bottom, moderate sediment load	
0960_MW115	12 Dec 2024	Hydrasleeve	4.913	0.357	3 - 8	7.865	4.556	7	6.85	33,683	2.62	-96	29	No odour, no sheen, colourless, slight turbidity, red/orange at bottom, low sediment load	
0960_MW122	13 Dec 2024	Hydrasleeve	3.97	0.076	1.7 - 7.7	7.365	3.894	7	7.09	48,932	1.71	-77.4	29.6	Colourless, slightly turbid, no odour, no sheen, orange at bottom	
0960_MW124	12 Dec 2024	Hydrasleeve	2.918	-1.766	1 - 6	8.31	4.684	7.5	7.17	86,722	1.91	-77.1	30.7	Highly turbid, orange, no odour, no sheen, low to moderate sediment load	
0960_MW126	12 Dec 2024	Hydrasleeve	4.509	0.088	2 - 8	7.557	4.421	7	6.87	62,029	2.94	-64.5	30	Colourless, no odour, no sheen, orange at bottom, low sediment load	
0960_MW127	12 Dec 2024	Hydrasleeve	5.624	0.092	2.5 - 8.5	7.139	5.532	6.8	6.99	69,923	2.93	-78.3	29.8	Highly turbid, orange, low to moderate sediment load, no odour, no sheen	
0960_MW134	13 Dec 2024	Hydrasleeve	2.515	0.108	1 - 5.7	5.526	2.407	5	7.08	60,818	0.55	-91.1	29.6	Colourless, slightly turbid, no odour, no sheen, orange at bottom, low sediment load	
0960_MW135	17 Dec 2024	Peristaltic Pump	2.778	0.298	2.5 - 3	3.381	2.48	3.25	6.94	36,173	0.09	-77.8	29.3	Clear, colourless, no odour, no sheen, no turbidity	
0960_MW137	16 Dec 2024	Peristaltic Pump	2.115	0.746	0.8 - 1.3	1.9	1.369	1.8	7.24	79,523	2.31	-94.1	32.8	Light yellow, low - moderate turbidity, no odour, no sheen, low sediment load	
0960_MW137	16 Dec 2024	Peristaltic Pump	2.177	0.833	2.5 - 3	3.313	1.344	3.2	6.94	78,576	0.04	-100.9	30.6	Light yellow/brown, moderate turbidity, no odour, no sheen, low sediment load	
0960_MW137	16 Dec 2024	Peristaltic Pump	2.244	0.858	4.5 - 5	5.359	1.386	5.2	6.91	75,621	0.1	-106.8	29.9	Brown/grey, high turbidity, no odour, no sheen, moderate sediment load	
0960_MW137	16 Dec 2024	Peristaltic Pump	2.272	0.816	6.5 - 7	7.08	1.456	6.9	7.21	76,553	0.61	-90.1	29.9	Brown/grey, high turbidity, no odour, no sheen, moderate sediment load	
0960_MW138	16 Dec 2024	Peristaltic Pump	3.3166	-	5 - 5.5	5.5	-	5.5	7.03	78,573	0.08	-78.7	30.7	Pale brown, moderatly turbid, no odour, no sheen, low sediment load	
0960_MW139	13 Dec 2024	Hydrasleeve	4.139	0.13	2 - 7	6.483	4.009	6	7	64,174	1.41	-83.9	29.4	Orange, moderately turbid, low sediment load, no odour, no sheen	
0960_MW140	16 Jan 2024	Peristaltic Pump	2.5035	0.8385	1.5 - 2	2.51	1.665	2.4	7.02	101,400	0.37	72.2	33.2	-	
0960_MW141	17 Dec 2024	Peristaltic Pump	2.81	0.703	3 - 3.5	3.36	2.107	3.25	6.99	37,543	0.1	-62.7	29.5	Light brown, highly turbid, no odour, no sheen	
0960_MW141	17 Dec 2024	Peristaltic Pump	2.81	0.7	5 - 5.5	5.483	2.11	5.3	6.93	41,040	0.61	-65.4	29.4	Grey, highly turbid, no odour, no sheen, moderate sediment load	
0960_MW141	17 Dec 2024	Peristaltic Pump	2.81	0.565	7 - 7.5	2.861	2.245	6.7	6.88	50,422	1.7	-34.5	30	Brown / grey, highly turbid, high sediment load, no odour, no sheen	
0960_MW143	17 Dec 2024	Peristaltic Pump	2.827	-0.01	3 - 3.5	3.801	2.837	3.7	6.29	85,788	1.02	-28	31.6	Clear, colourless, no odour, no sheen, low turbidity	
0960_MW144	17 Dec 2024	Peristaltic Pump	3.048	0.133	3 - 3.5	3.846	2.915	3.7	6.92	40,243	0.25	-43.1	30	Clear, colourless, no odour, no sheen, no turbidity	
0960_MW145	14 Dec 2024	Peristaltic Pump	3.148	0.003	3 - 3.5	3.79	3.145	3.6	7	100,699	1.8	-108.9	31.1	Clear, colourless, no odour, no sheen, no turbidity	
0960_MW146	11 Dec 2024	Peristaltic Pump	2.794	0.111	2.794 - 3	3.345	2.683	3.2	7.11	95,690	2.77	-70.8	30.7	Clear, colourless, no odour, no sheen, low to no turbidity	
0960_MW147	17 Dec 2024	Peristaltic Pump	2.915	0.161	3 - 3.5	3.765	2.754	3.6	6.95	98,052	0.14	-76	31.7	Pale orange, slightly turbid, no odour, no sheen	
0960_MW148D	12 Dec 2024	Hydrasleeve	3.578	-0.062	14 - 20	18.41	3.64	16	7.13	80,995	2.42	-66	29.7	Clear, colourless, no odour, no sheen, no turbidity	
0960_MW148S	12 Dec 2024	Hydrasleeve	3.685	0.079	2 - 8	7.949	3.606	7	6.93	29,388	0.95	-90.2	30.7	Clear, colourless, low sediment load, roots in hydrasleeve, no odour, no sheen	
0960_MW151	13 Dec 2024	Hydrasleeve	4.063	0.193	2 - 8	7.531	3.87	7	7.01	3,266	0.84	-61.2	30.4	Colouress, slightly turbid, no odour, no sheen, pale orange at bottom of hydrasleeve	
0960_MW162	11 Dec 2024	Hydrasleeve	6.856	0.574	17 - 20	19.461	6.282	8	7.29	12,815	2.08	-68.4	31.2	Clear, colourless, no odour, no sheen, low sediment, low to no turbidity	
0960_MW164	11 Dec 2024	Hydrasleeve	6.789	0.594	17 - 20	19.4	6.195	-	8.34	6,104	3.82	-56.6	31	Colourless, no odour, no sheen, no sediments, no turbidity	
0960_MW165	11 Dec 2024	Hydrasleeve	6.104	0.599	3 - 9	8.848	5.505	7.5	8.18	1,958	1.46	-64	30.4	Clear, colourless, no odour, no sheen, some red colour at bottom of hydrasleeve	
0960_MW166	12 Dec 2024	Hydrasleeve	5.744	0.584	2.5 - 8.5	7.51	5.16	7	7.39	2,902	2.14	-51.4	29.5	Clear, colourless, no odour, no sheen, low sediment load, dead ants within hydrasleeve	
0960_MW167	12 Dec 2024	Hydrasleeve	6.209	0.545	2.5 - 8.5	8.872	5.664	8.2	7.48	4,503	2.05	-80.6	29.1	Colourless, no odour, no sheen, orange at bottom, low sediment load	
0960_MW168	12 Dec 2024	Hydrasleeve	6.171	0.498	2.5 - 8.5	8.77	5.673	8	6.94	11,315	1.61	-94.9	27.9	Clear, colourless, no odour, no sheen, orange at the bottom, low sediment load	
0960_MW170	12 Dec 2024	Hydrasleeve	5.639	0.234	2.5 - 8.5	8.907	5.405	8	6.99	39,505	2.23	-84.6	29.3	Very pale yellow, low to moderate turbidity, no odur, no sheen, low sediment load	
0960_MW172	12 Dec 2024	Hydrasleeve	5.619	0.328	2.5 - 8.5	8.31	5.291	8	7.1	29,220	1.7	-84.2	29.8	Colourless, no odour, no sheen, orange brown at bottom, moderate turbidity,	
0960_MW174	16 Dec 2024	Hydrasleeve	7.484	0.571	1 - 7	7.564	6.913	7.4	6.9	5,587	3.98	-95.2	30.4	orange/brown, highly turbid, no odur, no sheen, purged 4 L with bailer as hydrasleeve	
0960_MW175	14 Dec 2024	Peristaltic Pump	4.792	0.572	4 - 4.5	4.821	4.22	4.8	7.24	9,390	0.11	-114	28.9	Clear, colourless, no odour, no sheen, no turbidity	
0960_MW176	15 Dec 2024	Peristaltic Pump	2.171	0.442	1.5 - 2	2.489	1.729	2.4	6.94	55,608	0.04	-101.7	30.4	Colourless, slightly turbid, no sheen, no odour,	
0960_MW176	15 Dec 2024	Peristaltic Pump	2.171	0.448	3.5 - 4	4.5	1.723	4	7.02	54,976	0.05	-103.2	29.4	Clear, colourless, no odour, no sheen	
0960_MW176	15 Dec 2024	Peristaltic Pump	2.171	0.428	6 - 6.5	6.54	1.743	6.2	6.92	87,698	0.1	-103.7	29.5	Pale brown, moderately turbid, no sheen, no odour,	
0960_MW176	15 Dec 2024	Peristaltic Pump	2.171	0.426	8.5 - 9	8.99	1.745	8.7	6.98	97,732	0.01	-112.2	30.5	Pale brown, highly turbid, no sheen, no odour,	



			Well Data			Field data			Field Parameters					
			TOC Elevation	Groundwater Elevation	Screen interval	Total Well Depth	Standing Water Level	Sample Depth	pH (Field)	Electrical conductivity (field)	Dissolved Oxygen (Field)	Redox (Field)	Temperature (Field)	
m AHD		m bgl	m bTOC			pH units	µS/cm	mg/L	mV	°C				
Location Code	Date	Sampling Method												Sample Comment
0960_MW018	12 Dec 2024	Hydrasleeve	6.403	0.606	5.5 - 8.5	8.045	5.797	7.5	7.71	3,083	2.67	-78.9	27.7	Clear, pale orange, no odour, no sheen, orange at bottom
0960_MW177	15 Dec 2024	Peristaltic Pump	2.23	0.764	1.5 - 2	2.538	1.466	2.2	6.87	95,267	0.09	-137.1	30.5	Clear, colourless, no turbidity, no sedmient load, no odour, no sheen
0960_MW177	15 Dec 2024	Peristaltic Pump	2.353	0.734	3.5 - 4	8.884	1.619	6.5	6.74	95,900	0.15	-96.2	28.9	Pale yellow, moderately turbidity, low sedmient load, no odour, no sheen
0960_MW177	15 Dec 2024	Peristaltic Pump	2.249	0.753	6 - 6.5	4.565	1.496	6.5	6.97	95,168	0.15	-122.9	29.7	Pale yellow, moderate turbidity, moderate sedmient load, no odour, no sheen
0960_MW177	15 Dec 2024	Peristaltic Pump	2.088	0.611	8.5 - 9	6.655	1.477	2.5	6.99	95,980	0.12	-130.4	29.3	Pale yellow, moderate turbidity, moderate sedmient load, no odour, no sheen
0960_MW178	16 Dec 2024	Peristaltic Pump	2.161	0.227	2 - 2.5	2.989	1.934	2.85	6.99	90,733	0.17	-83.9	30.5	Colourless, low turbid, no odour, no sheen, low sediment load
0960_MW178	16 Dec 2024	Peristaltic Pump	2.161	0.241	4 - 4.5	4.752	1.92	4.5	6.95	88,185	0.12	-44.8	30	Colourless, low turbid, no odour, no sheen, low sediment load
0960_MW178	16 Dec 2024	Peristaltic Pump	2.161	0.195	7 - 7.5	7.571	1.966	7.4	6.34	91,184	0.03	-17.8	29.6	Light brown, moderately turbid, no odour, no sheen, low sediment load
0960_MW178	16 Dec 2024	Peristaltic Pump	2.161	0.158	9 - 9.5	8.876	2.003	8.75	6.97	89,263	0.01	-35.6	30.4	Brown, moderately turbid, no odour, no sheen, low sediment load
0960_MW179	16 Dec 2024	Peristaltic Pump	2.237	0.84	1 - 1.5	2.003	1.397	2.8	6.79	78,755	0.64	-79.3	32.4	Colourless, no odour, no sheen, low to moderate sediment load, low turbidity
0960_MW179	16 Dec 2024	Peristaltic Pump	2.237	0.825	3.2 - 3.7	2.961	1.412	2.8	6.89	76,331	0	-107.7	29.7	Pale brown, no odour, no sheen, low to moderate sediment load, high turbidity
0960_MW179	16 Dec 2024	Peristaltic Pump	2.237	0.797	5.9 - 6.4	3.774	1.44	2.8	6.64	78,475	1.25	-63.6	31.2	Pale brown, no odour, no sheen, low to moderate sediment load, high turbidity
0960_MW179	16 Dec 2024	Peristaltic Pump	2.237	0.833	8.5 - 9	6.06	1.404	2.8	7.12	52,099	0.04	-109.1	31.1	Pale brown/orange, no odour, no sheen, moderate sediment load, moderate turbidity
0960_MW180	16 Jan 2024	Peristaltic Pump	1.918	0.963	1 - 1.5	1.87	0.955	1.37	7.13	88,685	0.62	107.7	33.7	Low sediment load. cloudy orange. no odour.
0960_MW181	16 Jan 2024	Peristaltic Pump	2.233	0.472	1.5 - 2	2.46	1.761	2.3	6.85	105,311	1.08	5.5	34.2	Slightly cloudy orange, light sediment load, no odour
0960_MW211	12 Dec 2024	Hydrasleeve	6.341	0.631	5.5 - 8.5	6.89	5.71	7.5	8.23	1,714	4.08	-79.1	29.9	Highly turbid, orange, no odour, no sheen, moderate sediment load
0960_MW222	15 Dec 2024	Hydrasleeve	1.521	-0.663	0.2 - 3.2	3.789	2.184	3.6	6.86	52,315	0.65	-37.7	29.4	Pale orange, moderate turbidity, organic matter (roots), low sediment load,
0960_MW227	13 Dec 2024	Grab sample	31.536	-	-	-	-	-	6.87	1,097	2.94	-53	30.6	Production bore, grab sample obtained: Clear, colourless, no odour, no sheen, no turbidity
0960_MW228	13 Dec 2024	Grab sample	33.393	-	-	-	-	-	6.89	1,074	2.83	-76.3	30.8	Production bore, grab sample obtained: Clear, colourless, no odour, no sheen, no turbidity
0960_MW229	13 Dec 2024	Grab sample	33.177	-	-	-	-	-	6.89	1,090	1.89	-75.7	31.8	Production bore, grab sample obtained: Clear, colourless, no odour, no sheen, no turbidity
0960_MW230	13 Dec 2024	Grab sample	38.44	-	-	-	-	-	7.04	3,130	0.98	-80.6	35.9	Production bore, grab sample obtained: Clear, colourless, no odour, no sheen, no turbidity
0960_MW233	12 Dec 2024	Hydrasleeve	6.262	0.637	4 - 7	6.956	5.625	6.8	8.07	1,952	2.34	-68.2	31.5	Orange/brown, highly turbid, moderate fine sediment load, no sheen
0960_MW238	12 Dec 2024	Hydrasleeve	3.98	0.176	3 - 6	6.04	3.804	5.5	7.92	5,133	5.12	-85.5	29.7	Highly turbid, brown, high sediment load, no odour, no sheen



Appendix C
Table C2
Seepage Water Physicochemical Parameters

			Field Parameters					Sample Comments
Location Code	Date	Sampling Method	pH (Field)	Electrical conductivity (field)	Dissolved Oxygen (Field)	Redox (Field)	Temperature (Field)	
			pH units	µS/cm	mg/L	mV	°C	
0960_OTH103	15 Dec 2024	Porewater	7.82	54,425	4.08	-100.5	29.9	Clear, colourless, odourless, no sheen
0960_OTH106	16 Jan 2025	Porewater	7.88	57,749	4.21	119	26.9	high sediment load (med sand), brown grey, odourless
0960_OTH107	16 Jan 2025	Porewater	7.75	56,991	0.76	125.9	28	high sediment load (med sand), brown grey, odourless
0960_OTH129	14 Dec 2024	Porewater	8.11	56,289	3.68	-65.2	32.7	Clear, colourless, odourless, no sheen, low sediment load
0960_OTH132	14 Dec 2024	Porewater	7.74	57,742	5.64	-91.8	29.2	Clear, colourless, odourless, no sheen
0960_OTH134	14 Dec 2024	Porewater	7.66	58,125	5.83	-108.7	29.5	Clear, colourless, odourless, no sheen



Appendix C
Table C3
Surface Water Physicochemical Parameters

12641234 - PFAS OMP: RAAF Learmonth 2024

Location Code	Date	Sampling Method	Field Parameters							Sample Comments
			pH (Field)	Electrical conductivity (field)	Dissolved Oxygen (Field)	DO (%S) (Field)	Redox (Field)	Temperature (Field)	TDS (Field)	
			pH units	µS/cm	mg/L	%S	mV	°C	mg/L	
0960_SW001	15 Dec 2024	grab	8.14	65,635	5.76	110.5	-44.4	38.7	42,676	<i>Colourless, low turbidity, no sheen, no odour, low sediment load, shells, crabs</i>
0960_SW205	16 Jan 2025	grab	7.65	70,902	1.76	32.5	76.3	26.8	46,094	<i>Clear, faint/pale grey brown, organic sour smell</i>
0960_SW207	16 Jan 2025	grab	7.87	59,618	2	34.2	91.2	27.2	38,755	<i>Grey-brown, medium to low sediment load, highly organic and sour/"yeasty" smell.</i>
0960_SW208	15 Dec 2024	grab	7.82	56,900	4.52	71.8	-47	28.4	39,150	<i>Low to moderate turbidity, pale green, no sheen, no odour, low sediment load</i>
0960_SW209	16 Dec 2024	grab	7.87	60,278	5.56	95	-47	31.8	39,150	<i>Very pale yellow/green, no odour, no sheen, low turbidity, low sediment load</i>
0960_SW300	15 Dec 2024	grab	6.9	78,800	3.92	80.5	-24.1	37.4	51,308	<i>Colourless, low turbidity, no odour, no sheen, organic matter (leaves, insects, fish)</i>
0960_SW301	16 Jan 2025	grab	8.08	73,107	0.78	11.1	86.5	29.6	47,530	<i>Pale yellow/brown, medium sediment load, organic sour odour</i>
0960_SW302	16 Dec 2024	grab	7.83	63,153	5.11	91.8	-42.9	34.9	41,049	<i>Colourless, no odour, no sheen, low turbidity, low sediment load</i>
0960_SW303	15 Dec 2024	grab	7.62	53,915	1.63	25.8	-87.1	28.2	35,034	<i>Pale yellow/green, slight bacterial sheen, no odour, slightly-moderately turbid</i>
0960_SW304	15 Dec 2024	grab	7.79	60,518	2.24	24.1	-142.3	28.8	39,347	<i>Moderately turbid, pale yellow, stagnant, some organic matter, bacterial sheen, no odour</i>
0960_SW305	16 Jan 2025	grab	7.85	59,787	0.56	9.5	101.1	29.5	38,866	<i>Clear, colourless, low sediment load, slightly organic smell</i>



					Monitoring Zone	Maintenance Area									
						Location Code	0960_MW112	0960_MW115	0960_MW165	0960_MW166	0960_MW166	0960_MW166	0960_MW167	0960_MW168	0960_MW018
					Sample Type	Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal	Normal
					Date	12 Dec 2024	12 Dec 2024	11 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024
					Field ID	0960_MW112_24 1212	0960_MW115_24 1212	0960_MW165_24 1211	0960_MW166_24 1212	0960_QC105_241 212	0960_QC205_241 212	0960_MW167_24 1212	0960_MW168_24 1212	0960_MW018_24 1212	0960_MW021_24 1212
					Lab Report Number	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	1173732	EP2418971	EP2418971	EP2418971	EP2418971
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)										
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	0.04	0.24	<0.02	0.06	0.07	0.05	0.05	0.09	0.10	0.25
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	0.04	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	0.04	<0.02
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.54	0.41	0.02	0.21	0.23	0.23 ^{#1}	0.63	0.13	0.83	0.44
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	0.07	<0.02	<0.02	<0.02	0.02	<0.02	0.02	0.03	0.05
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		0.03	0.22	<0.02	0.04	0.04	0.03 ^{#1}	0.04	0.09	0.12	0.18
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	0.41	1.81	<0.01	0.28	0.28	0.26 ^{#1}	0.52	0.86	1.18	1.18
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		<0.1	<0.1	<0.1	0.2	0.2	0.16	<0.1	<0.1	0.8	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	0.02	<0.02	0.30	0.32	0.30 ^{#1}	0.15	0.02	1.66	0.03
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		0.07	0.44	<0.02	0.28	0.33	0.29	0.17	0.20	1.96	0.38
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	0.01	0.03	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	0.01	0.04	<0.01	0.22	0.21	0.21 ^{#1}	0.21	0.03	0.20	0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	0.08	<0.02	0.37	0.37	0.32	0.12	0.05	1.70	0.11
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide															
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05
PFAS - Sums															
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		1.10	3.37	0.02	1.96	2.05	1.88	1.92	1.49	8.62	2.63
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		1.07	3.04	0.02	1.92	2.01	1.82	1.85	1.38	8.43	2.40
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	0.44	-	-	-	-
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		0.95	2.22	0.02	0.49	0.51	0.49	1.15	0.99	2.01	1.62
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	0.7	-	-	-	-

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Maintenance Area						Pathway				
					Location Code	0960_MW114	0960_MW164	0960_MW211	0960_MW113	0960_MW162	0960_MW233	0960_MW144A	0960_MW145A	0960_MW146A	0960_MW147A	0960_MW180A
					Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
					Date	12 Dec 2024	11 Dec 2024	13 Dec 2024	12 Dec 2024	11 Dec 2024	11 Dec 2024	17 Dec 2024	14 Dec 2024	11 Dec 2024	17 Dec 2024	16 Jan 2025
					Field ID	0960_MW114_24 1212	0960_MW164_24 1211	0960_MW211_24 1212	0960_MW113_24 1212	0960_MW162_24 1211	0960_MW233_24 1211	0960_MW144A_2 41217	0960_MW145A_2 41214	0960_MW146A_2 41211	0960_MW147A_2 41217	0960_MW180A_2 50116
					Lab Report Number	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2419087	EP2419087	EP2418971	EP2500078	EP2500743
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)											
PFAS - Perfluoroalkyl Sulfonic Acids																
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	0.10	0.10	<0.02	0.51	0.09	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	0.03	0.04	<0.02	0.04	0.15	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	1.14	6.48	<0.01	0.34	0.98	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	0.02	0.04	<0.02	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	0.08	0.08	<0.02	0.42	0.10	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	0.78	0.76	<0.01	3.33	1.28	<0.01	<0.01	<0.01	<0.01	<0.01
PFAS - Perfluoroalkyl Carboxylic Acids																
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		<0.1	<0.1	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	0.03	0.06	<0.02	0.08	0.03	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	0.19	0.24	<0.02	0.86	0.21	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	0.03	0.06	<0.01	0.07	0.10	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	0.06	0.11	<0.02	0.26	0.08	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PFAS - Sums																
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.01	2.46	8.07	<0.01	6.26	3.05	<0.01	<0.01	<0.01	<0.01	<0.01
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.01	2.33	7.91	<0.01	5.65	2.77	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	-	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		<0.01	1.92	7.24	<0.01	3.67	2.26	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	-	-	-	-	-	-

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Pathway											
					Location Code	0960_MW180A	0960_MW180A	0960_MW181A	0960_MW181A	0960_MW181A	0960_MW181A	0960_MW126	0960_MW126	0960_MW126	0960_MW127	0960_MW143A	0960_MW138B
					Sample Type	Field_D	Interlab_D	Normal	Field_D	Interlab_D	Normal	Field_D	Interlab_D	Normal	Field_D	Interlab_D	Normal
					Date	16 Jan 2025	16 Jan 2025	16 Jan 2025	16 Jan 2025	16 Jan 2025	12 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	17 Dec 2024	16 Dec 2024
					Field ID	0960_QC115_250116	0960_QC215_250116	0960_MW181A_250116	0960_QC116_250116	0960_QC216_250116	0960_MW126_241212	0960_QC104_241212	0960_QC204_241212	0960_MW127_241212	0960_MW143A_241217	0960_MW138B_241216	
					Lab Report Number	EP2500743	1179640	EP2500743	EP2500743	1179640	EP2418971	EP2418971	1173732	EP2418971	EP2419087	EP2419087	
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)												
PFAS - Perfluoroalkyl Sulfonic Acids																	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.02	<0.02	<0.02	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.04	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.72	<0.01	<0.01	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.05	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.71	<0.01	<0.01	
PFAS - Perfluoroalkyl Carboxylic Acids																	
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	0.07	<0.02	<0.02	
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide																	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	
PFAS - Fluorotelomer Sulfonic Acids																	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	
PFAS - Sums																	
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.01	<0.1	<0.01	<0.01	<0.1	<0.01	<0.01	<0.1	1.65	<0.01	<0.01	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.05	1.56	<0.01	<0.01	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	<0.01	-	-	<0.01	-	-	<0.01	-	-	-	
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.43	<0.01	<0.01	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	<0.01	-	-	<0.01	-	-	<0.01	-	-	-	

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Pathway											
					Location Code	0960_MW122	0960_MW122	0960_MW122	0960_MW170	0960_MW124	0960_MW103	0960_MW104	0960_MW102	0960_MW172	0960_MW134	0960_MW135A	
					Sample Type	Normal	Field_D	Interlab_D	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	
					Date	13 Dec 2024	13 Dec 2024	13 Dec 2024	12 Dec 2024	12 Dec 2024	13 Dec 2024	12 Dec 2024	12 Dec 2024	12 Dec 2024	13 Dec 2024	17 Dec 2024	
					Field ID	0960_MW122_24 1213	0960_QC107_241 213	0960_QC207_241 213	0960_MW170_24 1212	0960_MW124_24 1212	0960_MW103_24 1213	0960_MW104_24 1212	0960_MW102_24 1212	0960_MW172_24 1212	0960_MW134_24 1213	0960_MW135A_2 41217	
					Lab Report Number	EP2419087	EP2419087	1173732	EP2418971	EP2418971	EP2419087	EP2418971	EP2418971	EP2418971	EP2419087	EP2419087	
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)												
PFAS - Perfluoroalkyl Sulfonic Acids																	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	<0.02	<0.01	0.04	<0.02	0.20	0.04	<0.02	0.93	<0.02	<0.02	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	0.38	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	4.19	<0.01	<0.01	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	<0.01	<0.02	<0.02	0.07	<0.02	<0.02	0.32	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	0.05	<0.02	0.08	<0.02	<0.02	1.27	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	<0.01	<0.01	0.45	<0.01	0.32	0.06	<0.01	10.2	<0.01	<0.01	
PFAS - Perfluoroalkyl Carboxylic Acids																	
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.32	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	0.05	<0.02	0.08	<0.02	<0.02	3.17	<0.02	<0.02	
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.46	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	0.02	<0.02	<0.02	0.69	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide																	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
PFAS - Fluorotelomer Sulfonic Acids																	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
PFAS - Sums																	
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.01	<0.01	<0.1	0.61	<0.01	0.77	0.10	<0.01	22.2	<0.01	<0.01	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.01	<0.01	<0.05	0.56	<0.01	0.62	0.10	<0.01	20.3	<0.01	<0.01	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	<0.01	-	-	-	-	-	-	-	-	
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		<0.01	<0.01	<0.01	0.47	<0.01	0.32	0.06	<0.01	14.4	<0.01	<0.01	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	<0.01	-	-	-	-	-	-	-	-	

Comments

- #1 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.
- #2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)

HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Receptor												
					Location Code	0960_MW175A	0960_MW139	0960_MW137	0960_MW137	0960_MW137	0960_MW137	0960_MW137	0960_MW137	0960_MW137	0960_MW141	0960_MW141	0960_MW141	
					Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal		
					Date	14 Dec 2024	13 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	17 Dec 2024	17 Dec 2024	17 Dec 2024		
					Field ID	0960_MW175A_2 41214	0960_MW139_24 1213	0960_MW137A_2 41216	0960_MW137B_2 41216	0960_MW137C_2 41216	0960_MW137D_2 41216	0960_QC113_241 216	0960_QC213_241 216	0960_MW141B_2 41217	0960_MW141C_2 41217	0960_MW141D_2 41217		
					Lab Report Number	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	1173732	EP2500078	EP2500078	EP2500078		
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)													
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	-	-	-	-	-	<0.001	<0.0005	<0.0005	<0.0005		
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0002	<0.0002	<0.0002		
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	<0.01	0.0015	0.0029	0.0084	0.0114	0.0021	0.0033	<0.0020	<0.0020	<0.0020		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.001	<0.0005	<0.0005	<0.0005		
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	<0.01	0.0014	0.0013	0.0019	0.0016	0.0012	0.001 ^{#1}	-	-	-		
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		<0.1	<0.1	<0.0020	<0.0020	0.0022	0.0027	<0.0020	<0.005	<0.0020	<0.0020	<0.0020		
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	<0.005	<0.0005	<0.0005	<0.0005		
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005		
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-					
PFAS - Perfluoroalkyl Sulfonamide																		
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001		
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005		
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001		
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001		
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005		
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005		
PFAS - Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001		
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		
PFAS - Sums																		
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.01	<0.01	0.0029	0.0042	0.0125	0.0163	0.0033	-	<0.0002	<0.0002	<0.0002		
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.01	<0.01	0.0029	0.0042	0.0125	0.0163	0.0033	0.0113	<0.0002	<0.0002	<0.0002		
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	-	-	0.0033	<0.0002	<0.0002	<0.0002		
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		<0.01	<0.01	0.0029	0.0042	0.0103	0.0130	0.0033	0.0043	-	-	-		
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	-	-	0.0043	-	-	-		

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



Monitoring Zone						Receptor										
Location Code						0960_MW177A	0960_MW177B	0960_MW177C	0960_MW177D	0960_MW177B	0960_MW177B	0960_MW178A	0960_MW178B	0960_MW178C	0960_MW178D	0960_MW178B
Sample Type						Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal	Normal	Field_D
Date						15 Dec 2024	15 Dec 2024	15 Dec 2024	15 Dec 2024	15 Dec 2024	15 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024
Field ID						0960_MW177A_2 41215	0960_MW177B_2 41215	0960_MW177C_2 41215	0960_MW177D_2 41215	0960_QC110_241 215	0960_QC210_241 215	0960_MW178A_2 41216	0960_MW178B_2 41216	0960_MW178C_2 41216	0960_MW178D_2 41216	0960_QC114_241 216
Lab Report Number						EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	1173732	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)											
PFAS - Perfluoroalkyl Sulfonic Acids																
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		-	-	-	-	-	<0.001	-	-	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.0006	0.0009	0.0010	0.0011	0.0006	<0.0001	<0.0002	<0.0002	0.0004	0.0026	<0.0002
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	0.0008	0.0010	0.0010	0.0009	0.0009	<0.001	<0.0005	<0.0005	<0.0005	0.0018	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids																
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		0.0034	<0.0020	<0.0020	<0.0020	0.0026	<0.005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.0005	0.0014	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.0008 ^{#2}	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.002 ^{#2}	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.002 ^{#2}	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PFAS - Fluorotelomer Sulfonic Acids																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PFAS - Sums																
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		0.0048	0.0033	0.0020	0.0030	0.0041	-	<0.0002	<0.0002	0.0004	0.0044	<0.0002
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		0.0048	0.0033	0.0020	0.0030	0.0041	<0.005	<0.0002	<0.0002	0.0004	0.0044	<0.0002
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	<0.001	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		0.0014	0.0019	0.0020	0.0020	0.0015	<0.001	<0.0002	<0.0002	0.0004	0.0044	<0.0002
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	<0.001	-	-	-	-	-

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Receptor											
						Location Code	0960_MW178B	0960_MW179A	0960_MW179B	0960_MW179C	0960_MW179D	0960_MW140A	0960_MW140A	0960_MW140A	0960_MW176A	0960_MW176B	0960_MW176C
						Sample Type	Interlab_D	Normal	Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal
						Date	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Dec 2024	16 Jan 2025	16 Jan 2025	16 Jan 2025	15 Dec 2024	15 Dec 2024	15 Dec 2024
						Field ID	0960_QC214_241 216	0960_MW179A_2 41216	0960_MW179B_2 41216	0960_MW179C_2 41216	0960_MW179D_2 41216	0960_MW140A_2 50116	0960_QC117_250 116	0960_QC217_250 116	0960_MW176A_2 41215	0960_MW176B_2 41215	0960_MW176C_2 41215
					Lab Report Number	1173732	EP2419087	EP2419087	EP2419087	EP2419087	EP2500743	EP2500743	1179640	EP2419087	EP2419087	EP2419087	
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)												
PFAS - Perfluoroalkyl Sulfonic Acids																	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.001	-	-	-	-	<0.02	<0.02	<0.01	-	-	-	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.0001	0.0002	0.0003	0.0005	0.0003	<0.01	<0.01	<0.01	<0.0002	<0.0002	0.0018	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.02	<0.02	<0.01	<0.0020	<0.0020	<0.0020	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	<0.01	<0.01	<0.0005	<0.0005	0.0008	
PFAS - Perfluoroalkyl Carboxylic Acids																	
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		<0.005	<0.0020	<0.0020	<0.0020	0.0020	<0.1	<0.1	<0.05	<0.0020	<0.0020	<0.0020	
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.05	<0.0005	<0.0005	<0.0005	
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005	
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.05	<0.01	<0.0005	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.01	<0.0005	<0.0005	<0.0005	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide																	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.005	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.05	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.005	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.005	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.05	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.005	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.001	<0.001	<0.001	
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	<0.02	<0.05	<0.0005	<0.0005	<0.0005	
PFAS - Fluorotelomer Sulfonic Acids																	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.005	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.001	<0.001	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	
PFAS - Sums																	
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		-	0.0002	0.0003	0.0005	0.0023	<0.01	<0.01	<0.1	<0.0002	<0.0002	0.0026	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.005	0.0002	0.0003	0.0005	0.0023	<0.01	<0.01	<0.05	<0.0002	<0.0002	0.0026	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		<0.001	-	-	-	-	-	-	<0.01	-	-	-	
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		<0.001	0.0002	0.0003	0.0005	0.0003	<0.01	<0.01	<0.01	<0.0002	<0.0002	0.0026	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		<0.001	-	-	-	-	-	-	<0.01	-	-	-	

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Additional Wells										Fuel Farm	
					Location Code	0960_MW176D	0960_MW227	0960_MW228	0960_MW229	0960_MW229	0960_MW229	0960_MW230	0960_MW222	0960_MW174	0960_MW105	0960_MW148D	
					Sample Type	Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal	Normal	Normal	
					Date	15 Dec 2024	13 Dec 2024	13 Dec 2024	13 Dec 2024	13 Dec 2024	13 Dec 2024	13 Dec 2024	15 Dec 2024	16 Dec 2024	13 Dec 2024	12 Dec 2024	
					Field ID	0960_MW176D_2 41215	0960_MW227_24 1213	0960_MW228_24 1213	0960_MW229_24 1213	0960_QC106_241 213	0960_QC206_241 213	0960_MW230_24 1213	0960_MW222_24 1215	0960_MW174_24 1216	0960_MW105_24 1213	0960_MW148D_2 41212	
					Lab Report Number	EP2419087	EP2419087	EP2419087	EP2419087	EP2419087	1173732	EP2419087	EP2419087	EP2419087	EP2419087	EP2418971	
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)												
PFAS - Perfluoroalkyl Sulfonic Acids																	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	0.023	<0.002	0.25	1.18	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.02	<0.02	
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		-	<0.02	-	-	-	<0.01	-	-	-	<0.02	<0.02	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	0.02	0.23	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.0040	<0.01	<0.002	<0.002	<0.002	<0.01	<0.002	0.024	<0.002	0.08	1.84	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.0020	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.07	0.38	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	0.005	<0.002	0.29	0.76	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	0.0017	<0.01	<0.002	<0.002	<0.002	<0.01	<0.002	0.020	<0.002	1.44	3.50	
PFAS - Perfluoroalkyl Carboxylic Acids																	
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		0.0070	<0.1	<0.01	<0.01	<0.01	<0.05	<0.01	0.04	<0.01	<0.1	0.2	
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		0.0007	<0.02	<0.002	<0.002	<0.002	<0.05	<0.002	<0.002	<0.002	0.02	0.12	
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	0.002	<0.002	0.35	1.18	
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.0005	<0.01	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	0.02	0.19	
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	0.07	0.28	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.0005	<0.05	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05	<0.05	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.02	<0.02	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	-	
PFAS - Perfluoroalkyl Sulfonamide																	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.001	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.05	<0.002	<0.002	<0.002	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		0.001	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.05	<0.002	<0.002	<0.002	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.05	
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.02	<0.002	<0.002	<0.002	<0.05	<0.002	<0.002	<0.002	<0.02	<0.02	
PFAS - Fluorotelomer Sulfonic Acids																	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.05	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05	<0.05	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		0.003	<0.05	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.05	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.05	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.05	<0.05	
PFAS - Sums																	
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		0.0174	<0.01	<0.002	<0.002	<0.002	<0.1	<0.002	0.124	<0.002	2.61	9.86	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		0.0164	<0.01	<0.002	<0.002	<0.002	<0.05	<0.002	0.109	<0.002	2.23	8.49	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	<0.01	-	-	-	-	-	
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		0.0057	<0.01	<0.002	<0.002	<0.002	<0.01	<0.002	0.044	<0.002	1.52	5.34	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-	-	-	<0.01	-	-	-	-	-	

Comments

#1 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.
#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)
HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



					Monitoring Zone	Fuel Farm		
					Location Code	0960_MW148S	0960_MW151	0960_MW238
					Sample Type	Normal	Normal	Normal
					Date	12 Dec 2024	13 Dec 2024	12 Dec 2024
					Field ID	0960_MW148S_2 41212	0960_MW151_24 1213	0960_MW238_24 1212
					Lab Report Number	EP2418971	EP2419087	EP2418971
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)			
PFAS - Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	7.16	2.56	2.25
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.001		<0.02	<0.08 ^{#2}	0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		2.37	1.51	1.40
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	13.2	17.2	10.5
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		2.75	0.67	0.76
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		5.99	3.52	2.21
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	31.7	30.1	17.5
PFAS - Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002		2.2	1.5	1.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		1.05	0.96	0.61
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		14.4	12.4	7.24
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	1.36	1.42	1.14
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		3.44	2.52	1.99
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	-		-	-	-
PFAS - Perfluoroalkyl Sulfonamide								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05
PFAS - Sums								
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		85.6	74.4	46.8
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		74.5	68.7	42.4
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		44.9	47.3	28.0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.001		-	-	-

Comments

#1 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.

#2 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

DWER, November 2021 (Version 1), DWER 2021 Non-potable groundwater use (NPUG)

HEPA, March 2025, PFAS NEMP 2025 Drinking water quality



				Monitoring Zone	Beach					WAPET Creek	
				Location Code	0960_OTH106	0960_OTH107	0960_OTH129	0960_OTH132	0960_OTH134	0960_OTH103	0960_OTH103
				Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Interlab_D
				Date	16 Jan 2025	16 Jan 2025	14 Dec 2024	14 Dec 2024	14 Dec 2024	15 Dec 2024	15 Dec 2024
				Field ID	0960_OTH106_250116	0960_OTH107_250116	0960_OTH129_241214	0960_OTH132_241214	0960_OTH134_241214	0960_OTH103_241215	0960_QC209_241215
				Lab Report Number	EP2500743	EP2500743	EP2419087	EP2419087	EP2419087	EP2419087	1173732
Analyte	Unit	LOR	PFAS NEMP 2025 Interim marine 99%	PFAS NEMP 2025 Recreational water quality							
PFAS - Perfluoroalkyl Sulfonic Acids											
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	0.00023	2	<0.0002	<0.0002	<0.0002	0.0014	0.0007	0.0002	0.0001
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.001
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005		2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
PFAS - Perfluoroalkyl Carboxylic Acids											
Perfluorobutanoic acid (PFBA)	µg/L	0.002			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.005
Perfluorodecanoic acid (PFDA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005			<0.0005	<0.0005	<0.0008 ^{#1}	<0.0005	<0.0005	<0.0005	<0.001
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Perfluorononanoic acid (PFNA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	19	10	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005			<0.0005	<0.0005	<0.0008 ^{#1}	<0.0005	<0.0005	<0.0005	<0.001
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.0005			<0.0005	<0.0005	<0.0008 ^{#1}	<0.0005	<0.0005	<0.0005	<0.001
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
PFAS - Perfluoroalkyl Sulfonamide											
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001			<0.001	<0.001	<0.002 ^{#1}	<0.002 ^{#1}	<0.001	<0.001	<0.005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005			<0.0005	<0.0005	<0.0008 ^{#1}	<0.0005	<0.0005	<0.0005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001			<0.001	<0.001	<0.002 ^{#1}	<0.001	<0.001	<0.001	<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001			<0.001	<0.001	<0.002 ^{#1}	<0.002 ^{#1}	<0.001	<0.001	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001			<0.001	<0.001	<0.002 ^{#1}	<0.001	<0.001	<0.001	<0.005
Perfluorooctane sulfonamide (FOSA)	µg/L	0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
PFAS - Fluorotelomer Sulfonic Acids											
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PFAS - Sums											
PFAS (Sum of Total)	µg/L	0.0002			<0.0002	<0.0002	<0.0002	0.0014	0.0007	0.0002	-
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002			<0.0002	<0.0002	<0.0002	0.0014	0.0007	0.0002	<0.005
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001			-	-	-	-	-	-	<0.001
Sum of PFHxS and PFOS	µg/L	0.0002		2	<0.0002	<0.0002	<0.0002	0.0014	0.0007	0.0002	<0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001			-	-	-	-	-	-	<0.001

Comments

#1 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards

HEPA, March 2025, PFAS NEMP 2025 Interim marine 99%

HEPA, March 2025, PFAS NEMP 2025 Recreational water quality



						Monitoring Zone	Beach			Southern Drainage Channel				
						Location Code	0960_SW303	0960_SW304	0960_SW305	0960_SW300	0960_SW300	0960_SW300	0960_SW301	0960_SW302
						Sample Type	Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal
						Date	15 Dec 2024	15 Dec 2024	16 Jan 2025	15 Dec 2024	15 Dec 2024	15 Dec 2024	16 Jan 2025	16 Dec 2024
						Field ID	0960_SW303_2 41215	0960_SW304_2 41215	0960_SW305_2 50116	0960_SW300_2 41215	0960_QC112_2 41215	0960_QC212_2 41215	0960_SW301_2 50116	0960_SW302_2 41216
						Lab Report Number	EP2419087	EP2419087	EP2500743	EP2419087	EP2419087	1173732	EP2500743	EP2419087
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (supr ultra trace)	PFAS NEMP 2025 Interim marine 99%	PFAS NEMP 2025 Recreational water quality								
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.01			<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0002	0.00023	2	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.01	<0.01
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.002			<0.02	<0.02	<0.02	<0.01	<0.02	<0.01	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005		2	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.01	<0.01
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002			<0.1	<0.1	<0.1	<0.01	<0.1	<0.05	<0.1	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.05	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	19	10	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005			<0.05	<0.05	<0.05	<0.005	<0.05	<0.01	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.01	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	0.005			-	-	-	<0.005	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide														
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.05	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.05	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005			<0.02	<0.02	<0.02	<0.002	<0.02	<0.05	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.01	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.01	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001			<0.05	<0.05	<0.05	<0.005	<0.05	<0.01	<0.05	<0.05
PFAS - Sums														
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002			<0.01	<0.01	<0.01	<0.002	<0.01	<0.1	<0.01	<0.01
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002			<0.01	<0.01	<0.01	<0.002	<0.01	<0.05	<0.01	<0.01
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.01			-	-	-	-	-	<0.01	-	-
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		2	<0.01	<0.01	<0.01	<0.002	<0.01	<0.01	<0.01	<0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.01			-	-	-	-	-	<0.01	-	-

Environmental Standards
HEPA, March 2025, PFAS NEMP 2025 Interim marine 99%
HEPA, March 2025, PFAS NEMP 2025 Recreational water quality



						Monitoring Zone	WAPET Creek					
						Location Code	0960_SW001	0960_SW205	0960_SW207	0960_SW208	0960_SW209	0960_SW211
						Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
						Date	15 Dec 2024	16 Jan 2025	16 Jan 2025	15 Dec 2024	16 Dec 2024	16 Dec 2024
						Field ID	0960_SW001_2 41215	0960_SW205_2 50116	0960_SW207_2 50116	0960_SW208_2 41215	0960_SW209_2 41216	0960_SW211_2 41216
						Lab Report Number	EP2419087	EP2500743	EP2500743	EP2419087	EP2419087	EP2419087
Analyte	Unit	LOR (standard)	LOR (low level)	LOR (supr ultra trace)	PFAS NEMP 2025 Interim marine 99%	PFAS NEMP 2025 Recreational water quality						
PFAS - Perfluoroalkyl Sulfonic Acids												
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.02	0.01	0.01			-	<0.02	<0.02	-	-	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0002	0.00023	2	0.0007	<0.01	<0.01	<0.0002	<0.0002	0.0051
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.002			<0.0020	<0.02	<0.02	<0.0020	<0.0020	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005		2	<0.0005	<0.01	<0.01	<0.0005	<0.0005	0.0007
PFAS - Perfluoroalkyl Carboxylic Acids												
Perfluorobutanoic acid (PFBA)	µg/L	0.01	0.01	0.002			<0.0020	<0.1	<0.1	<0.0020	<0.0020	0.0054
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	19	10	<0.0005	<0.01	<0.01	<0.0005	<0.0005	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005			<0.0005	<0.05	<0.05	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	-	-	0.005			-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide												
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	0.002	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.0005	<0.0005
PFAS - Fluorotelomer Sulfonic Acids												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001			<0.001	<0.05	<0.05	<0.001	<0.001	<0.001
PFAS - Sums												
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002			0.0007	<0.01	<0.01	<0.0002	<0.0002	0.0112
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002			0.0007	<0.01	<0.01	<0.0002	<0.0002	0.0112
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	-	0.01			-	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L	0.01	0.002	0.0002		2	0.0007	<0.01	<0.01	<0.0002	<0.0002	0.0058
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	-	0.01			-	-	-	-	-	-

Environmental Standards

HEPA, March 2025, PFAS NEMP 2025 Interim marine 99%
HEPA, March 2025, PFAS NEMP 2025 Recreational water quality



	Monitoring Zone		Additional Onsite										Central Drainage Channel				Fire Training Area - East		
	Location Code		0960_SD157	0960_SD166	0960_SD168	0960_SD170	0960_SD174	0960_SD176	0960_SD265	0960_SD277	0960_SD278	0960_SD279	0960_SD198	0960_SD291	0960_SD292	0960_SD293	0960_SD108	0960_SD227	0960_SD227
	Sample Type		Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Field_D
	Date		11 Dec 2024	11 Dec 2024	11 Dec 2024	11 Dec 2024	11 Dec 2024	11 Dec 2024	10 Dec 2024	11 Dec 2024	10 Dec 2024	11 Dec 2024	14 Dec 2024	14 Dec 2024	14 Dec 2024	14 Dec 2024	11 Dec 2024	14 Dec 2024	14 Dec 2024
	Field ID		0960_SD157_2	0960_SD166_2	0960_SD168_2	0960_SD170_2	0960_SD174_2	0960_SD176_2	0960_SD265_2	0960_SD277_2	0960_SD278_2	0960_SD279_2	0960_SD198_2	0960_SD291_2	0960_SD292_2	0960_SD293_2	0960_SD108_2	0960_SD227_2	0960_QC108_2
	Lab Report Number		41211	41211	41211	41211	41211	41211	41210	41210	41210	41211	41214	41214	41214	41214	41211	41214	241214
	Lab Report Number		EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	EP2419087	EP2419087	EP2419087	EP2419087	EP2418971	EP2419087	EP2419087	
Analyte	Unit	LOR																	
Inorganics																			
% Moisture	%	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Moisture (%)	%	0.1	2.7	2.7	3.4	2.2	0.6	1.8	3.8	1.8	1.7	1.8	2.2	2.9	2.7	1.2	6.4	0.7	
PFAS - Perfluoroalkyl Sulfonic Acids																			
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	0.0015	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0012	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0051	0.0021	0.0027	0.0050	0.0073	0.0062	0.0073	0.0032	0.0228	0.0068	<0.0002	0.0043	0.0029	0.0120	0.0087	0.0003	
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	0.0015	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
PFAS - Perfluoroalkyl Carboxylic Acids																			
Perfluorobutanoic acid (PFBA)	mg/kg	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	
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
PFAS - Perfluoroalkyl Sulfonamide																			
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
PFAS - Fluorotelomer Sulfonic Acids																			
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PFAS - Sums																			
PFAS (Sum of Total)	mg/kg	0.0002	0.0076	0.0021	0.0027	0.0053	0.0075	0.0062	0.0073	0.0032	0.0246	0.0068	<0.0002	0.0043	0.0029	0.0120	0.0087	0.0003	
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	0.0076	0.0021	0.0027	0.0050	0.0075	0.0062	0.0073	0.0032	0.0231	0.0068	<0.0002	0.0043	0.0029	0.0120	0.0087	0.0003	
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sum of PFHxS and PFOS	mg/kg	0.0002	0.0066	0.0021	0.0027	0.0050	0.0075	0.0062	0.0073	0.0032	0.0231	0.0068	<0.0002	0.0043	0.0029	0.0120	0.0087	0.0003	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Comments

#1 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.



Monitoring Zone	Fire Training Area - East		Fuel Farm (Former and Current)								Hangars			Maintenance Area				
	Location Code	0960_SD227	0960_SD113	0960_SD114	0960_SD219	0960_SD219	0960_SD219	0960_SD231	0960_SD231	0960_SD235	0960_SD243	0960_SD243	0960_SD243	0960_SD121	0960_SD122	0960_SD123	0960_SD123	0960_SD123
	Sample Type	Interlab_D	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal	Normal	Field_D	Interlab_D	Normal	Normal	Normal	Field_D	Interlab_D
	Date	14 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	11 Dec 2024	11 Dec 2024	11 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024	10 Dec 2024
	Field ID	0960_QC208	0960_SD113_2	0960_SD114_2	0960_SD219_2	0960_QC102	0960_QC202	0960_SD231_2	0960_SD234_2	0960_SD235_2	0960_SD243_2	0960_QC103	0960_QC203	0960_SD121_2	0960_SD122_2	0960_SD123_2	0960_QC101	0960_QC201
	Lab Report Number	241214	41210	41210	41210	241210	241210	41210	41210	41210	41211	241211	241211	41210	41210	41210	241210	241210
		1173732	EP2418971	EP2418971	EP2418971	EP2418971	1173732	EP2418971	EP2418971	EP2418971	EP2418971	EP2418971	1173732	EP2418971	EP2418971	EP2418971	EP2418971	1173732
Analyte	Unit	LOR																
Inorganics																		
% Moisture	%	1	1.2	-	-	-	-	1.5	-	-	-	-	2.1	-	-	-	-	<1
Moisture (%)	%	0.1	-	1.7	1.3	1.0	1.4	-	3.4	5.6	1.9	1.7	1.7	-	0.6	1.6	0.7	0.6
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0005	0.0011	<0.0002	0.0002	0.0002	<0.005	<0.0002	<0.0002	0.0006	0.0015
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0030	0.0036	0.0003	0.0003	0.0003	<0.005	<0.0002	<0.0002	0.0003	0.0020
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	0.0010	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	<0.005	0.0108	0.0083	0.0013	0.0011	<0.005	0.0603	0.0752	0.0060	0.0115	0.0109	0.0069 ^{#1}	0.0414	0.0292	0.0170	0.0333
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	<0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-	-	<0.005
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0022	0.0005	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	0.0004	0.0006	0.0006
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0005	0.0008	<0.0002	<0.0002	<0.0002	<0.005	0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	0.0003	0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0004	0.0008	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	0.0003	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.0008	0.0003	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
PFAS - Perfluoroalkyl Sulfonamide																		
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.01
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.01
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
PFAS - Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	<0.0005	<0.0005	<0.0005	<0.01
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.005
PFAS - Sums																		
PFAS (Sum of Total)	mg/kg	0.0002	<0.05	0.0108	0.0083	0.0013	0.0011	<0.05	0.0650	0.0791	0.0060	0.0117	0.0111	<0.05	0.0416	0.0309	0.0185	0.0356
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	<0.01	0.0108	0.0083	0.0013	0.0011	<0.01	0.0633	0.0760	0.0060	0.0115	0.0109	<0.01	0.0414	0.0296	0.0179	0.0341
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	<0.005	-	-	-	-	<0.005	-	-	-	-	-	0.0069	-	-	-	0.018
Sum of PFHxS and PFOS	mg/kg	0.0002	<0.005	0.0108	0.0083	0.0013	0.0011	<0.005	0.0625	0.0757	0.0060	0.0115	0.0109	0.0069	0.0414	0.0296	0.0176	0.0339
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	<0.005	-	-	-	-	<0.005	-	-	-	-	-	0.0069	-	-	-	0.018

Comments

#1 Quantification of linear and branched isomers has been conducted as a single total response using



	Monitoring Zone		Maintenance Area		Northern Drainage Channel					Receptor (Wapet Creek)					Southern Drainage Channel					WAPET Creek
	Location Code	0960_SD124	0960_SD125	0960_SD189	0960_SD190	0960_SD192	0960_SD193	0960_SD288	0960_SD300	0960_SD302	0960_SD303	0960_SD304	0960_SD305	0960_SD009	0960_SD199	0960_SD200	0960_SD298	0960_SD205		
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal		
	Date	11 Dec 2024	10 Dec 2024	14 Dec 2024	10 Dec 2024	14 Dec 2024	14 Dec 2024	12 Dec 2024	15 Dec 2024	16 Dec 2024	15 Dec 2024	15 Dec 2024	16 Jan 2025	16 Jan 2025	12 Dec 2024	12 Dec 2024	17 Dec 2024	16 Jan 2025		
	Field ID	0960_SD124_2	0960_SD125_2	0960_SD189_2	0960_SD190_2	0960_SD192_2	0960_SD193_2	0960_SD288_2	0960_SD300_2	0960_SD302_2	0960_SD303_2	0960_SD304_2	0960_SD305_2	0960_SD009_2	0960_SD199_2	0960_SD200_2	0960_SD298_2	0960_SD205_2		
	Lab Report Number	41211	41210	41214	41211	41214	41214	41210	41215	41216	41215	41215	50116	50116	41212	41212	41217	50116		
	Unit	LOR																		
Analyte																				
Inorganics																				
% Moisture	%	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Moisture (%)	%	0.1	1.2	0.9	1.6	5.7	0.3	12.2	5.2	28.4	27.3	22.7	35.8	28.6	19.6	2.7	4.5	1.8		
PFAS - Perfluoroalkyl Sulfonic Acids																				
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	0.0002	<0.0002	<0.0002	0.0009	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0397	0.0056	0.0017	0.0434	<0.0002	0.0008	0.0027	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0007	<0.0002	<0.0002		
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
PFAS - Perfluoroalkyl Carboxylic Acids																				
Perfluorobutanoic acid (PFBA)	mg/kg	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		
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	0.0009	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
PFAS - Perfluoroalkyl Sulfonamide																				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0				

Comments

#1 Quantification of linear and branched isomers has been conducted as a single total response using



Monitoring Zone	WAPET Creek									
	Location Code	0960_SD207	0960_SD208	0960_SD209	0960_SD210	0960_SD211	0960_SD301	0960_SD301	0960_SD301	
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Field_D	Interlab_D	
	Date	16 Jan 2025	15 Dec 2024	16 Dec 2024	14 Dec 2024	15 Dec 2024	15 Dec 2024	15 Dec 2024	15 Dec 2024	15 Dec 2024
	Field ID	0960_SD207_2	0960_SD208_2	0960_SD209_2	0960_SD210_2	0960_SD211_2	0960_SD301_2	0960_QC111_	0960_QC211_	
	Lab Report Number	50116	41215	41216	41214	41216	41215	241215	241215	
Analyte	Unit	LOR								
Inorganics										
% Moisture_	%	1	-	-	-	-	-	-	-	29
Moisture (%)	%	0.1	22.1	29.4	31.6	21.3	28.8	28.2	28.9	-
PFAS - Perfluoroalkyl Sulfonic Acids										
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0029	0.0009	<0.0002	0.0002	<0.005
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	-	-	-	<0.005
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.005
PFAS - Perfluoroalkyl Carboxylic Acids										
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
PFAS - Perfluoroalkyl Sulfonamide										
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
PFAS - Fluorotelomer Sulfonic Acids										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
PFAS - Sums										
PFAS (Sum of Total)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0032	0.0009	<0.0002	0.0002	<0.05
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0032	0.0009	<0.0002	0.0002	<0.01
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	-	-	-	<0.005
Sum of PFHxS and PFOS	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0032	0.0009	<0.0002	0.0002	<0.005
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	-	-	-	<0.005

Comments

#1 Quantification of linear and branched isomers has been conducted as a single total response using

Appendix D

Equipment calibration

Calibration Report

Multi-Parameter Water Quality Instrument

Customer: GHD

Contact:

Manufacturer: YSI

Instrument: Professional Plus with Quatro cable

Serial #: 23G103462

Cable length: 1m (23G100262)

Item	Test	Pass	Comments
Battery	2 x Alkaline C-cells	✓	Voltage reading above 2.9V
	Battery Saver	✓	Automatically turns off after 30 minutes if not used
Connections	Condition	✓	Good, clean
Cable	Condition	✓	Clean, no tears
Display	Operation	✓	
Firmware	Version	✓	4.0.0
Keypad	Operational	✓	
Display	Screen	✓	
Unit	Condition, seals and O-rings	✓	
Monitor housing	Condition	✓	
pH			
	Condition	✓	Good, clean
	pH millivolts for pH7 calibration range 0 mV ± 50 mV	✓	
	pH 4 mV range + 165 to + 180 from 7 buffer mV value	✓	169.40 mV
	pH slope	✓	55 to 60 mV/pH, ideal 59mV 56.73
	Response time < 90 seconds	✓	
	Calibrated and conforms to manufacturer's specifications	✓	
ORP			
	Condition	✓	Good, clean
	Response time < 90 seconds	✓	
	within ± 80mv of reference Zobell Reading	✓	
	Calibrated and conforms to manufacturer's specifications	✓	variance range ± 20mV 8 mV
Conductivity			
	Condition	✓	Good, clean
	Temperature	✓	°C
	Conductivity cell constant 5.0 ± 1.0 in GLP file	✓	
	Clean sensor reads less than 3 uS/cm in dry air	✓	
	Calibrated and conforms to manufacturer's specifications	✓	µs/cm
Dissolved Oxygen			
	Condition	✓	Good, clean
	DO sensor in use	✓	polarographic
	1.25 mil PE membrane (yellow membrane):	✓	
	DO Sensor Value	✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA
	Calibrated and conforms to manufacturer's specifications	✓	ppm

This is to certify that the above instrument has been calibrated to the following specifications:

Instrument Readings

Parameter	Standards	Reference	Calibration Point	Span	Units	Before	After	Units
Temperature (23G100242)	Check Temp NATA	Room Temp	22.6	0	°C	NA	22.6	°C
pH (23F)	pH 7.00	398528	7.01	-18.70	mV	7.03	7.01	pH
pH (23F)	pH 4.00	401033	4.00	150.70	mV	4.03	4.00	pH
Conductivity (23G100242)	2764 µs/cm at 25°C	24/0107	2764	GLP	4.97	2750	2764	µs/cm
ORP (23E)	Zobell A & B	24/1807	234	234	mV	228.7	226.5	mV
Zero DO (23D100530)	NaSO3 in distilled water	10175	0.0	NA	NA	0.2	0.0	%
100% DO (23D100530)	100% Air Saturation	Air	100.0	6.3	uA	99.5	100.0	%

Calibrated by: Gaurav Kanwar

Calibration Date: 08-Jan-25

Next Due: 07-Jul-25

Calibration Report

Multi-Parameter Water Quality Instrument

Customer:

Contact:

Manufacturer: YSI

Instrument: Professional Plus with Quatro cable

Serial #: 22C103026

Cable length: 1m (22B100428)

Item	Test	Pass	Comments
Battery	2 x Alkaline C-cells	✓	Voltage reading above 2.9V
	Battery Saver	✓	Automatically turns off after 30 minutes if not used
Connections	Condition	✓	Good, clean
Cable	Condition	✓	Clean, no tears
Display	Operation	✓	
Firmware	Version	✓	4.0.0
Keypad	Operational	✓	
Display	Screen	✓	
Unit	Condition, seals and O-rings	✓	
Monitor housing	Condition	✓	
pH			
Condition		✓	Good, clean
pH millivolts for pH7 calibration range	0 mV ± 50 mV	✓	
pH 4 mV range + 165 to + 180 from 7 buffer mV value		✓	171.10 mV
pH slope		✓	55 to 60 mV/pH, Ideal 59mV 57.54
Response time < 90 seconds		✓	
Calibrated and conforms to manufacturer's specifications		✓	
ORP			
Condition		✓	Good, clean
Response time < 90 seconds		✓	
within ± 80mv of reference Zobell Reading		✓	
Calibrated and conforms to manufacturer's specifications		✓	variance range ± 20mV 9 mV
Conductivity			
Condition		✓	Good, clean
Temperature		✓	°C
Conductivity cell constant 5.0 ± 1.0 in GLP file		✓	
Clean sensor reads less than 3 uS/cm in dry air		✓	
Calibrated and conforms to manufacturer's specifications		✓	µs/cm
Dissolved Oxygen			
Condition		✓	Good, clean
DO sensor in use		✓	polarographic
1.25 mil PE membrane (yellow membrane):		✓	
DO Sensor Value		✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA
Calibrated and conforms to manufacturer's specifications		✓	ppm

This is to certify that the above instrument has been calibrated to the following specifications:

Parameter	Standards	Reference	Calibration Point	Span	Units	Instrument Readings		
						Before	After	Units
Temperature (22B100315)	Check Temp NATA	Room Temp	21.2	-0.2	°C	NA	21	°C
pH (24J)	pH 7.00	398528	7.01	-3.80	mV	7	7.01	pH
pH (24J)	pH 4.00	401033	4.00	167.30	mV	4.03	4.00	pH
Conductivity (22B100315)	2764 µs/cm at 25°C	24/0107	2764	GLP	5.03	2762	2764	µs/cm
ORP (200409SIA605101)	Zobell A & B	24/2803	238	238	mV	220.2	228.8	mV
Zero DO (22E100254)	NaSO ₃ in distilled water	10175	0.0	NA	NA	0.1	0.0	%
100% DO (22E100254)	100% Air Saturation	Air	100.0	4.5	uA	90.9	100.0	%

Calibrated by: Gaurav Kanwar

Calibration Date: 23-Nov-24

Next Due: 22-May-25



Calibration Report

Multi-Parameter Water Quality Instrument

Customer:

Contact:

Manufacturer: YSI

Instrument: Professional Plus with Quatro cable

Serial #: 22B104437

Cable length: 1m (24B100555)

Item	Test	Pass	Comments
Battery	2 x Alkaline C-cells	✓	Voltage reading above 2.9V
	Battery Saver	✓	Automatically turns off after 30 minutes if not used
Connections	Condition	✓	Good, clean
Cable	Condition	✓	Clean, no tears
Display	Operation	✓	
Firmware	Version	✓	4.0.0
Keypad	Operational	✓	
Display	Screen	✓	
Unit	Condition, seals and O-rings	✓	
Monitor housing	Condition	✓	
pH			
Condition		✓	Good, clean
pH millivolts for pH7 calibration range	0 mV ± 50 mV	✓	
pH 4 mV range + 165 to + 180 from 7 buffer mV value		✓	174.50 mV
pH slope		✓	55 to 60 mV/pH, ideal 59mV 58.69
Response time < 90 seconds		✓	
Calibrated and conforms to manufacturer's specifications		✓	
ORP			
Condition		✓	Good, clean
Response time < 90 seconds		✓	
within ± 80mv of reference Zobell Reading		✓	
Calibrated and conforms to manufacturer's specifications		✓	variance range ± 20mV 9 mV
Conductivity			
Condition		✓	Good, clean
Temperature		✓	°C
Conductivity cell constant 5.0 ± 1.0 in GLP file		✓	
Clean sensor reads less than 3 uS/cm in dry air		✓	
Calibrated and conforms to manufacturer's specifications		✓	µs/cm
Dissolved Oxygen			
Condition		✓	Good, clean
DO sensor in use		✓	polarographic
1.25 mil PE membrane (yellow membrane):		✓	
DO Sensor Value		✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA
Calibrated and conforms to manufacturer's specifications		✓	ppm

This is to certify that the above instrument has been calibrated to the following specifications:

Parameter	Standards	Reference	Calibration Point	Span	Units	Instrument Readings		
						Before	After	Units
Temperature (22B100315)	Check Temp NATA	Room Temp	20.8	0	°C	NA	20.8	°C
pH (23F)	pH 7.00	398528	7.01	-20.10	mV	7.03	7.01	pH
pH (23F)	pH 4.00	401033	4.00	154.40	mV	4.03	4.00	pH
Conductivity (22B100315)	2764 µs/cm at 25°C	24/0107	2764	GLP	4.87	2689	2764	µs/cm
ORP (23L)	Zobell A & B	24/2803	238	238	mV	229.7	229.2	mV
Zero DO (22B100173)	NaSO3 in distilled water	10175	0.0	NA	NA	0	0.0	%
100% DO (22B100173)	100% Air Saturation	Air	100.0	5.5	uA	94.1	100.0	%

Calibrated by: Gaurav Kanwar

Calibration Date: 05-Nov-24

Next Due: 04-May-25

Calibration Report

Multi-Parameter Water Quality Instrument

Customer:
Contact:

Manufacturer: YSI
Instrument: Professional Plus with Quatro cable
Serial #: 23G103457
Cable length: 1m (23G100259)

Item	Test	Pass	Comments
Battery	2 x Alkaline C-cells	✓	Voltage reading above 2.9V
	Battery Saver	✓	Automatically turns off after 30 minutes if not used
Connections	Condition	✓	Good, clean
Cable	Condition	✓	Clean, no tears
Display	Operation	✓	
Firmware	Version	✓	4.0.0
Keypad	Operational	✓	
Display	Screen	✓	
Unit	Condition, seals and O-rings	✓	
Monitor housing	Condition	✓	
pH			
Condition		✓	Good, clean
pH millivolts for pH7 calibration range	0 mV ± 50 mV	✓	
pH 4 mV range + 165 to + 180 from 7 buffer mV value		✓	174.30 mV
pH slope		✓	55 to 60 mV/pH, ideal 59mV 58.51
Response time < 90 seconds		✓	
Calibrated and conforms to manufacturer's specifications		✓	
ORP			
Condition		✓	Good, clean
Response time < 90 seconds		✓	
within ± 80mv of reference Zobell Reading		✓	
Calibrated and conforms to manufacturer's specifications		✓	variance range ± 20mV 8 mV
Conductivity			
Condition		✓	Good, clean
Temperature		✓	°C
Conductivity cell constant 5.0 ± 1.0 in GLP file		✓	
Clean sensor reads less than 3 uS/cm in dry air		✓	
Calibrated and conforms to manufacturer's specifications		✓	µs/cm
Dissolved Oxygen			
Condition		✓	Good, clean
DO sensor in use		✓	polarographic
1.25 mil PE membrane (yellow membrane):		✓	
DO Sensor Value		✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA
Calibrated and conforms to manufacturer's specifications		✓	ppm

This is to certify that the above instrument has been calibrated to the following specifications:

Parameter	Standards	Reference	Calibration Point	Span	Units	Instrument Readings		
						Before	After	Units
Temperature (24G100320)	Check Temp NATA	Room Temp	21.6	0	°C	NA	21.6	°C
pH (22M)	pH 7.00	398528	7.01	-17.70	mV	7.05	7.01	pH
pH (22M)	pH 4.00	401033	4.00	156.60	mV	4.02	4.00	pH
Conductivity (24G100320)	2764 µs/cm at 25°C	24/0602	2764	GLP	5.02	2757	2764	µs/cm
ORP (23A)	Zobell A & B	24/2803	236	236	mV	219.3	228	mV
Zero DO (23J100061)	NaSO3 in distilled water	10175	0.0	NA	NA	0.6	0.0	%
100% DO (23J100061)	100% Air Saturation	Air	100.0	5.2	uA	99.4	100.0	%

Calibrated by: Gaurav Kanwar

Calibration Date: 28-Nov-24

Next Due: 27-May-25

Appendix E

Laboratory reports and chain of custody documents



CHAIN OF CUSTODY

COC#: 77018 ALS Laboratory: EP Perth Environmental

CLIENT: GHD SER - GHD PTY LTD
PROJECT: 12641234 - PFAS OMP
SITE: 0960
ORDER NO: 12641234
PROJECT MANAGER: [REDACTED]
PRIMARY SAMPLER: [REDACTED]
EMAIL REPORTS TO: [REDACTED]
EMAIL INVOICES TO: [REDACTED]

RELINQUISHED BY:

DATE TIME:

RECEIVED BY: [Signature]
DATE TIME: 17/12 1425

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)
Custody Seal intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED								
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0960_MW233_241211		11/12/2024 03:25 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
002	0960_MW162_241211		11/12/2024 03:57 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
003	0960_MW164_241211		11/12/2024 03:10 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
004	0960_MW018_241212		12/12/2024 11:49 AM	WATER	ALS: 3 Non ALS: 0	No		X	X						
005	0960_MW165_241211		11/12/2024 02:40 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
006	0960_MW166_241212		12/12/2024 01:24 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
007	0960_MW167_241212		12/12/2024 01:35 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						

Environmental Division
Perth
Work Order Reference
EP2418971



Telephone : +61-8-9406 1301



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

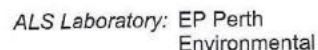
°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0960_MW168_241212		12/12/2024 12:03 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
009	0960_MW112_241212		12/12/2024 01:08 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
010	0960_MW115_241212		12/12/2024 07:30 AM	WATER	ALS: 3 Non ALS: 0	No		X	X						
011	0960_MW021_241212		12/12/2024 10:39 AM	WATER	ALS: 3 Non ALS: 0	No		X	X						
012	0960_MW113_241212		12/12/2024 12:50 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
013	0960_MW114_241212		12/12/2024 11:22 AM	WATER	ALS: 3 Non ALS: 0	No		X	X						
014	0960_MW211_241212		13/12/2024 11:01 AM	WATER	ALS: 3 Non ALS: 0	No		X	X						



RECEIVED BY:

DATE TIME:

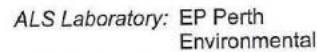
EMAIL INVOICES TO:

/ EP2024GHDSER0016

Other comments:

ANALYSIS REQUIRED

3 of 15



RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO:

/ EP2024GHDSER0016

Other comments:

4 of 15



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
Q29	0960_SD113_241210-0.10		10/12/2024 11:11 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
Q30	0960_SD114_241210-0.10		10/12/2024 11:11 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
Q31	0960_SD121_241210-0.10		10/12/2024 08:30 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
Q32	0960_SD122_241210-0.10		10/12/2024 08:35 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
Q33	0960_SD123_241210-0.10		10/12/2024 08:08 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
Q34	0960_SD124_241211-0.10		11/12/2024 11:40 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
Q35	0960_SD125_241210-0.10		10/12/2024 08:57 AM	SOIL	ALS: 1 Non ALS: 0	No							X		

ANALYSIS REQUIRED



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

CONTACT PH:

SAMPLER MOBILE: 0474 033 452

QUOTE NO: EP24GHDSER0016

/ EP2024GHDSER0016

SAMPLE DETAILS							ANALYSIS REQUIRED								ADDITIONAL INFORMATION
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	
036	0960_SD157_241211-0.00 -0.10		11/12/2024 10:58 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
037	0960_SD166_241211-0.10		11/12/2024 10:41 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
038	0960_SD168_241211-0.10		11/12/2024 10:30 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
039	0960_SD170_241211-0.10		11/12/2024 12:21 PM	SOIL	ALS: 1 Non ALS: 0	No							X		
040	0960_SD174_241211-0.10		11/12/2024 11:28 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
041	0960_SD176_241211-0.10		11/12/2024 10:00 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
042	0960_SD190_241210-0.10		10/12/2024 03:15 PM	SOIL	ALS: 1 Non ALS: 0	No							X		



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINGSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
043	0960_SD231_241210-0.10		10/12/2024 11:29 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
044	0960_SD234_241210-0.10		10/12/2024 10:21 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
045	0960_SD235_241210-0.10		10/12/2024 02:05 PM	SOIL	ALS: 1 Non ALS: 0	No							X		
046	0960_SD243_241211-0.10		11/12/2024 11:14 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
047	0960_SD265_241210-0.10		10/12/2024 12:45 PM	SOIL	ALS: 1 Non ALS: 0	No							X		
048	0960_SD277_241211-0.10		11/12/2024 11:39 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
049	0960_SD278_241210-0.10		10/12/2024 08:50 AM	SOIL	ALS: 1 Non ALS: 0	No							X		



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

SAMPLER MOBILE: 0474 033 452

QUOTE NO: EP24GHDSER0016

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water	Groundwater - Major Ions	Groundwater - PFAS	Groundwater - PFAS-LL	Intra-Lab Duplicate (PFAS) - Soil	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
050	0960_SS279_241211-0.10		11/12/2024 10:16 AM	SOIL	ALS: 1 Non ALS: 0	No							X		
051	0960_SD288_241210-0.10		12/12/2024 03:40 PM	SOIL	ALS: 1 Non ALS: 0	No							X		
052	0960_MW238_241212		12/12/2024 02:36 PM	WATER	ALS: 3 Non ALS: 0	No		X	X						
053	0960_QC304_241212		12/12/2024 10:15 AM	WATER	ALS: 2 Non ALS: 0	No						X			
054	0960_QC303_241212		11/12/2024 03:57 PM	WATER	ALS: 2 Non ALS: 0	No						X			
055	0960_QC302_241210		10/12/2024 02:05 PM	WATER	ALS: 2 Non ALS: 0	No						X			
056	0960_QC301_241209		09/12/2024 03:55 PM	WATER	ALS: 2 Non ALS: 0	No						X			



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

SAMPLER MOBILE: 0474 033 452

QUOTE NO: EP24GHDSER0016

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
057	0960_QC101_241210		10/12/2024 08:30 AM	SOIL	ALS: 1 Non ALS: 0	No					X				
058	0960_QC102_241210		10/12/2024 01:30 PM	SOIL	ALS: 1 Non ALS: 0	No					X				
059	0960_QC103_241211		11/12/2024 11:00 AM	SOIL	ALS: 1 Non ALS: 0	No					X				
060	0960_QC404_241212		12/12/2024 10:15 AM	WATER	ALS: 2 Non ALS: 0	No	X								
061	0960_QC403_241211		11/12/2024 03:57 PM	WATER	ALS: 2 Non ALS: 0	No	X								
062	0960_QC402_241210		10/12/2024 02:04 PM	WATER	ALS: 2 Non ALS: 0	No	X								
063	0960_QC401_241209		09/12/2024 03:55 PM	WATER	ALS: 2 Non ALS: 0	No	X								



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED								ADDITIONAL INFORMATION
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Intra-Lab Duplicate (PFAS) - Soil SOIL	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	
O64	0960_QC104_241212		12/12/2024 09:30 AM	WATER	ALS: 2 Non ALS: 0	No			X						
O65	0960_QC105_241212		12/12/2024 01:00 PM	WATER	ALS: 2 Non ALS: 0	No			X						
O66	0960_QC501_241212	TRIP BLANK	12/12/2024 03:50 PM	WATER	ALS: 2 Non ALS: 0	No	X								TRIP BLANK _ leaking in bag, left untouched
O67	0960_QC502_241213	TRIP BLANK	13/12/2024 08:35 AM	WATER	ALS: 2 Non ALS: 0	No	X								TRIP BLANK
O68	0960_MW229_241213		13/12/2024 02:43 PM	WATER	ALS: 3 Non ALS: 0	No		X		X					
O69	0960_MW228_241213		13/12/2024 03:09 PM	WATER	ALS: 3 Non ALS: 0	No		X		X					
O70	0960_MW227_241213		13/12/2024 03:17 PM	WATER	ALS: 3 Non ALS: 0	No		X		X					



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0960_MW233_241211	Clear Plastic Bottle - Natural	125 mL	00070823299709	Green	No	
001	0960_MW233_241211	HDPE (no PTFE)	20 mL	00350522046307	Grey	No	
001	0960_MW233_241211	HDPE (no PTFE)	20 mL	00350522046441	Grey	No	
002	0960_MW162_241211	Clear Plastic Bottle - Natural	125 mL	00070823	Green	No	
002	0960_MW162_241211	HDPE (no PTFE)	20 mL	00350522046727	Grey	No	
002	0960_MW162_241211	HDPE (no PTFE)	20 mL	00350522046508	Grey	No	
003	0960_MW164_241211	HDPE (no PTFE)	20 mL	00350522046300	Grey	No	
003	0960_MW164_241211	HDPE (no PTFE)	20 mL	00350522046197	Grey	No	
003	0960_MW164_241211	Clear Plastic Bottle - Natural	125 mL	00070823299566	Green	No	
004	0960_MW018_241212	Clear Plastic Bottle - Natural	125 mL	00070823299724	Green	No	
004	0960_MW018_241212	HDPE (no PTFE)	20 mL	00350522046334	Grey	No	
004	0960_MW018_241212	HDPE (no PTFE)	20 mL	00350522046303	Grey	No	
005	0960_MW165_241211	Clear Plastic Bottle - Natural	125 mL	00070823299570	Green	No	
005	0960_MW165_241211	HDPE (no PTFE)	20 mL	00350522046326	Grey	No	
005	0960_MW165_241211	HDPE (no PTFE)	20 mL	00350522046422	Grey	No	
006	0960_MW166_241212	Clear Plastic Bottle - Natural	125 mL	00070623195931	Green	No	
006	0960_MW166_241212	HDPE (no PTFE)	20 mL	00350522046555	Grey	No	
006	0960_MW166_241212	HDPE (no PTFE)	20 mL	00350522046396	Grey	No	
007	0960_MW167_241212	Clear Plastic Bottle - Natural	125 mL	00070823299686	Green	No	
007	0960_MW167_241212	HDPE (no PTFE)	20 mL	00350522046204	Grey	No	
007	0960_MW167_241212	HDPE (no PTFE)	20 mL	00350522046552	Grey	No	
008	0960_MW168_241212	Clear Plastic Bottle - Natural	125 mL	00070823299777	Green	No	
008	0960_MW168_241212	HDPE (no PTFE)	20 mL	00350522046683	Grey	No	
008	0960_MW168_241212	HDPE (no PTFE)	20 mL	00350522046259	Grey	No	
009	0960_MW112_241212	Clear Plastic Bottle - Natural	125 mL	00070823299674	Green	No	
009	0960_MW112_241212	HDPE (no PTFE)	20 mL	00350522046469	Grey	No	



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

009	0960_MW112_241212	HDPE (no PTFE)	20 mL	00350522046276	Grey	No	
010	0960_MW115_241212	Clear Plastic Bottle - Natural	125 mL	00070823299863	Green	No	
010	0960_MW115_241212	HDPE (no PTFE)	20 mL	00350522046443	Grey	No	
010	0960_MW115_241212	HDPE (no PTFE)	20 mL	00350522046526	Grey	No	
011	0960_MW021_241212	Clear Plastic Bottle - Natural	125 mL	00070823299697	Green	No	
011	0960_MW021_241212	HDPE (no PTFE)	20 mL	00350522046288	Grey	No	
011	0960_MW021_241212	HDPE (no PTFE)	20 mL	00350522046343	Grey	No	
012	0960_MW113_241212	Clear Plastic Bottle - Natural	125 mL	00070823299719	Green	No	
012	0960_MW113_241212	HDPE (no PTFE)	20 mL	00350522046471	Grey	No	
012	0960_MW113_241212	HDPE (no PTFE)	20 mL	00350522046482	Grey	No	
013	0960_MW114_241212	Clear Plastic Bottle - Natural	125 mL	00070823299833	Green	No	
013	0960_MW114_241212	HDPE (no PTFE)	20 mL	00350522046646	Grey	No	
013	0960_MW114_241212	HDPE (no PTFE)	20 mL	00350522046454	Grey	No	
014	0960_MW211_241212	Clear Plastic Bottle - Natural	125 mL	00070823299538	Green	No	
014	0960_MW211_241212	HDPE (no PTFE)	20 mL	00350522046576	Grey	No	
014	0960_MW211_241212	HDPE (no PTFE)	20 mL	00350522046506	Grey	No	
015	0960_MW148D_241212	Clear Plastic Bottle - Natural	125 mL	00070823299704	Green	No	
015	0960_MW148D_241212	HDPE (no PTFE)	20 mL	00350522046302	Grey	No	
015	0960_MW148D_241212	HDPE (no PTFE)	20 mL	00350522046561	Grey	No	
016	0960_MW148S_241212	HDPE (no PTFE)	20 mL	00350522046641	Grey	No	
016	0960_MW148S_241212	HDPE (no PTFE)	20 mL	00350522046227	Grey	No	
016	0960_MW148S_241212	Clear Plastic Bottle - Natural	125 mL	00070823299683	Green	No	
017	0960_MW146A_241211	Clear Plastic Bottle - Natural	125 mL	00070823299690	Green	No	
017	0960_MW146A_241211	HDPE (no PTFE)	20 mL	00350522046253	Grey	No	
017	0960_MW146A_241211	HDPE (no PTFE)	20 mL	00350522046374	Grey	No	
018	0960_MW172_241212	Clear Plastic Bottle - Natural	125 mL	00070823299706	Green	No	
018	0960_MW172_241212	HDPE (no PTFE)	20 mL	00350522046633	Grey	No	



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

018	0960_MW172_241212	HDPE (no PTFE)	20 mL	00350522046514	Grey	No	
019	0960_MW170_241212	Clear Plastic Bottle - Natural	125 mL	00070823299699	Green	No	
019	0960_MW170_241212	HDPE (no PTFE)	20 mL	00350522046244	Grey	No	
019	0960_MW170_241212	HDPE (no PTFE)	20 mL	00350522046267	Grey	No	
020	0960_MW127_241212	HDPE (no PTFE)	20 mL	00350522046658	Grey	No	
020	0960_MW127_241212	Clear Plastic Bottle - Natural	125 mL	00070823299684	Green	No	
020	0960_MW127_241212	HDPE (no PTFE)	20 mL	00350522046292	Grey	No	
021	0960_MW126_241212	HDPE (no PTFE)	20 mL	00350522046584	Grey	No	
021	0960_MW126_241212	HDPE (no PTFE)	20 mL	00350522046322	Grey	No	
021	0960_MW126_241212	Clear Plastic Bottle - Natural	125 mL	00070823299710	Green	No	
022	0960_MW102_241212	Clear Plastic Bottle - Natural	125 mL	00070823299738	Green	No	
022	0960_MW102_241212	HDPE (no PTFE)	20 mL	00350522046278	Grey	No	
022	0960_MW102_241212	HDPE (no PTFE)	20 mL	00350522046709	Grey	No	
023	0960_MW104_241212	Clear Plastic Bottle - Natural	125 mL	00070823299682	Green	No	
023	0960_MW104_241212	HDPE (no PTFE)	20 mL	00350522046717	Grey	No	
023	0960_MW104_241212	HDPE (no PTFE)	20 mL	00350522046592	Grey	No	
024	0960_MW124_241212	HDPE (no PTFE)	20 mL	00350522046529	Grey	No	
024	0960_MW124_241212	HDPE (no PTFE)	20 mL	00350522046661	Grey	No	
024	0960_MW124_241212	Clear Plastic Bottle - Natural	125 mL	00070823299679	Green	No	
025	0960_SD199_241212-0.10	HDPE Soil Jar	200 mL	00620724014428	Grey	No	
026	0960_SD200_241212-0.10	HDPE Soil Jar	200 mL	00620724014499	Grey	No	
027	0960_SD219_241210-0.10	HDPE Soil Jar	200 mL	00620724014493	Grey	No	
028	0960_SD108_241211-0.10	HDPE Soil Jar	200 mL	00620724014541	Grey	No	
029	0960_SD113_241210-0.10	HDPE Soil Jar	200 mL	00620724014425	Grey	No	
030	0960_SD114_241210-0.10	HDPE Soil Jar	200 mL	00620724014408	Grey	No	
031	0960_SD121_241210-0.10	HDPE Soil Jar	200 mL	00620724014516	Grey	No	
032	0960_SD122_241210-0.10	HDPE Soil Jar	200 mL	00620724014431	Grey	No	



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

033	0960_SD123_241210-0.10	HDPE Soil Jar	200 mL	00620724014426	Grey	No	
034	0960_SD124_241211-0.10	HDPE Soil Jar	200 mL	00620724014423	Grey	No	
035	0960_SD125_241210-0.10	HDPE Soil Jar	200 mL	00620724014528	Grey	No	
036	0960_SD157_241211_0.00	HDPE Soil Jar	200 mL	00620724014457	Grey	No	
037	0960_SD166_241211-0.10	HDPE Soil Jar	200 mL	00620724014498	Grey	No	
038	0960_SD168_241211-0.10	HDPE Soil Jar	200 mL	00621222007640	Grey	No	
039	0960_SD170_241211-0.10	HDPE Soil Jar	200 mL	00620724014512	Grey	No	
040	0960_SD174_241211-0.10	HDPE Soil Jar	200 mL	00620724014410	Grey	No	
041	0960_SD176_241211-0.10	HDPE Soil Jar	200 mL	00620724014496	Grey	No	
042	0960_SD190_241210-0.10	HDPE Soil Jar	200 mL	00620724014418	Grey	No	
043	0960_SD231_241210-0.10	HDPE Soil Jar	200 mL	00620724014521	Grey	No	
044	0960_SD234_241210-0.10	HDPE Soil Jar	200 mL	00620724014439	Grey	No	
045	0960_SD235_241210-0.10	HDPE Soil Jar	200 mL	00620724014552	Grey	No	
046	0960_SD243_241211-0.10	HDPE Soil Jar	200 mL	00620724014424	Grey	No	
047	0960_SD265_241210-0.10	HDPE Soil Jar	200 mL	00620724014446	Grey	No	
048	0960_SD277_241211-0.10	HDPE Soil Jar	200 mL	00620724014468	Grey	No	
049	0960_SD278_241210-0.10	HDPE Soil Jar	200 mL	00620724014448	Grey	No	
050	0960_SS279_241211-0.10	HDPE Soil Jar	200 mL	00620724014444	Grey	No	
051	0960_SD288_241210-0.10	HDPE Soil Jar	200 mL	00620724014436	Grey	No	
052	0960_MW238_241212	Clear Plastic Bottle - Natural	125 mL	00070823299798	Green	No	
052	0960_MW238_241212	HDPE (no PTFE)	20 mL	00350522046608	Grey	No	
052	0960_MW238_241212	HDPE (no PTFE)	20 mL	00350522046290	Grey	No	
053	0960_QC304_241212	HDPE (no PTFE)	20 mL	00350522046449	Grey	No	
053	0960_QC304_241212	HDPE (no PTFE)	20 mL	00350522046452	Grey	No	
054	0960_QC303_241212	HDPE (no PTFE)	20 mL	00350522046367	Grey	No	
054	0960_QC303_241212	HDPE (no PTFE)	20 mL	00350522046775	Grey	No	
055	0960_QC302_241210	HDPE (no PTFE)	20 mL	00350522046495	Grey	No	



CHAIN OF CUSTODY

COC#: 77018

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

055	0960_QC302_241210	HDPE (no PTFE)	20 mL	00350522046620	Grey	No	
056	0960_QC301_241209	HDPE (no PTFE)	20 mL	00350522046187	Grey	No	
056	0960_QC301_241209	HDPE (no PTFE)	20 mL	00350522046440	Grey	No	
057	0960_QC101_241210	HDPE Soil Jar	200 mL	00620724014445	Grey	No	
058	0960_QC102_241210	HDPE Soil Jar	200 mL	00620724014480	Grey	No	
059	0960_QC103_241211	HDPE Soil Jar	200 mL	00620724014466	Grey	No	
060	0960_QC404_241212	HDPE (no PTFE)	20 mL	00350522046421	Grey	No	
060	0960_QC404_241212	HDPE (no PTFE)	20 mL	00350522046362	Grey	No	
061	0960_QC403_241211	HDPE (no PTFE)	20 mL	00350522046390	Grey	No	
061	0960_QC403_241211	HDPE (no PTFE)	20 mL	00350522046679	Grey	No	
062	0960_QC402_241210	HDPE (no PTFE)	20 mL	00350522046581	Grey	No	
062	0960_QC402_241210	HDPE (no PTFE)	20 mL	00350522046341	Grey	No	
063	0960_QC401_241209	HDPE (no PTFE)	20 mL	00350522046222	Grey	No	
063	0960_QC401_241209	HDPE (no PTFE)	20 mL	00350522046525	Grey	No	
064	0960_QC104_241212	HDPE (no PTFE)	20 mL	00350522046291	Grey	No	
064	0960_QC104_241212	HDPE (no PTFE)	20 mL	00350522046194	Grey	No	
065	0960_QC105_241212	HDPE (no PTFE)	20 mL	00350522046389	Grey	No	
065	0960_QC105_241212	HDPE (no PTFE)	20 mL	00350522046271	Grey	No	
066	0960_QC501_241212	HDPE (no PTFE)	20 mL	00352312061069	Grey	No	
066	0960_QC501_241212	HDPE (no PTFE)	20 mL	00352312060504	Grey	No	
067	0960_QC502_241213	HDPE (no PTFE)	20 mL	00352312061185	Grey	No	
067	0960_QC502_241213	HDPE (no PTFE)	20 mL	00352312061067	Grey	No	
068	0960_MW229_241213	Clear Plastic Bottle - Natural	125 mL	00071122020044	Green	No	
068	0960_MW229_241213	HDPE (no PTFE)	20 mL	00352312075807	Grey	No	
068	0960_MW229_241213	HDPE (no PTFE)	20 mL	00352312076106	Grey	No	
069	0960_MW228_241213	HDPE (no PTFE)	20 mL	00352312076030	Grey	No	
069	0960_MW228_241213	HDPE (no PTFE)	20 mL	00352312075784	Grey	No	



CHAIN OF CUSTODY

COC#: 77018 ALS Laboratory: EP Perth Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

069	0960_MW228_241213	Clear Plastic Bottle - Natural	125 mL	00070823299727	Green	No	
070	0960_MW227_241213	HDPE (no PTFE)	20 mL	00352312075808	Grey	No	
070	0960_MW227_241213	HDPE (no PTFE)	20 mL	00352312075806	Grey	No	
070	0960_MW227_241213	Clear Plastic Bottle - Natural	125 mL	00071122019984	Green	No	

Total Bottle Count: ALS: 138, Non ALS: 0



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EP2418971

Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 999 HAY STREET PERTH WA, AUSTRALIA 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
E-mail	: [REDACTED]	E-mail	: [REDACTED]@alsglobal.com
Telephone	: ----	Telephone	: +61-8-9406 1301
Facsimile	: ----	Facsimile	: +61-8-9406 1399
Project	: 12641234 - PFAS OMP	Page	: 1 of 4
Order number	: 12641234	Quote number	: EP2024GHDSE0016_V5 (EP24GHDSE0016_V5)
C-O-C number	: 77018	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 0960		
Sampler	: [REDACTED]		

Dates

Date Samples Received	: 17-Dec-2024 14:25	Issue Date	: 23-Dec-2024
Client Requested Due Date	: 02-Jan-2025	Scheduled Reporting Date	: 02-Jan-2025

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 2	Temperature	: 22.1 - Ice present
Receipt Detail	: Ice -Ziplocked	No. of samples received / analysed	: 70 / 70

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 see scanned COC for sample discrepancies: extra samples , samples not received etc.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (Samples.Perth@alsglobal.com)
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Perth, NATA accreditation no. 825, site no. 15847.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **pH analysis should be conducted within 6 hours of sampling.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X-EP (solids) PFAS - Full Suite (30 analytes)
EP2418971-025	12-Dec-2024 16:09	0960_SD199_241212	✓	✓
EP2418971-026	12-Dec-2024 15:54	0960_SD200_241212	✓	✓
EP2418971-027	10-Dec-2024 13:41	0960_SD219_241210	✓	✓
EP2418971-028	11-Dec-2024 13:08	0960_SD108_241211	✓	✓
EP2418971-029	10-Dec-2024 11:11	0960_SD113_241210	✓	✓
EP2418971-030	10-Dec-2024 11:11	0960_SD114_241210	✓	✓
EP2418971-031	10-Dec-2024 08:30	0960_SD121_241210	✓	✓
EP2418971-032	10-Dec-2024 08:35	0960_SD122_241210	✓	✓
EP2418971-033	10-Dec-2024 08:08	0960_SD123_241210	✓	✓
EP2418971-034	11-Dec-2024 11:40	0960_SD124_241211	✓	✓
EP2418971-035	10-Dec-2024 08:57	0960_SD125_241210	✓	✓
EP2418971-036	11-Dec-2024 10:58	0960_SD157_241211	✓	✓
EP2418971-037	11-Dec-2024 10:41	0960_SD166_241211	✓	✓
EP2418971-038	11-Dec-2024 10:30	0960_SD168_241211	✓	✓
EP2418971-039	11-Dec-2024 12:21	0960_SD170_241211	✓	✓
EP2418971-040	11-Dec-2024 11:28	0960_SD174_241211	✓	✓
EP2418971-041	11-Dec-2024 10:00	0960_SD176_241211	✓	✓
EP2418971-042	10-Dec-2024 15:15	0960_SD190_241211	✓	✓
EP2418971-043	10-Dec-2024 11:29	0960_SD231_241210	✓	✓
EP2418971-044	10-Dec-2024 10:21	0960_SD234_241210	✓	✓
EP2418971-045	10-Dec-2024 14:05	0960_SD235_241210	✓	✓
EP2418971-046	11-Dec-2024 11:14	0960_SD243_241211	✓	✓
EP2418971-047	10-Dec-2024 12:45	0960_SD265_241210	✓	✓
EP2418971-048	11-Dec-2024 11:39	0960_SD277_241210	✓	✓
EP2418971-049	10-Dec-2024 08:50	0960_SD278_241210	✓	✓
EP2418971-050	11-Dec-2024 10:16	0960_SD279_241211	✓	✓
EP2418971-051	12-Dec-2024 15:40	0960_SD288_241210	✓	✓
EP2418971-057	10-Dec-2024 08:30	0960_QC101_241210	✓	✓
EP2418971-058	10-Dec-2024 13:30	0960_QC102_241210	✓	✓
EP2418971-059	11-Dec-2024 11:00	0960_QC103_241211	✓	✓



Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity
EP2418971-001	11-Dec-2024 15:25	0960_MW233_241211	✓		✓
EP2418971-002	11-Dec-2024 15:57	0960_MW162_241211	✓		✓
EP2418971-003	11-Dec-2024 15:10	0960_MW164_241211	✓		✓
EP2418971-004	12-Dec-2024 11:49	0960_MW018_241212	✓		✓
EP2418971-005	11-Dec-2024 14:40	0960_MW165_241211	✓		✓
EP2418971-006	12-Dec-2024 13:24	0960_MW166_241212	✓		✓
EP2418971-007	12-Dec-2024 13:35	0960_MW167_241212	✓		✓
EP2418971-008	12-Dec-2024 12:03	0960_MW168_241212	✓		✓
EP2418971 009	12 Dec 2024 13 08	0960_MW112_241212	✓		✓
EP2418971-010	12-Dec-2024 07:30	0960_MW115_241212	✓		✓
EP2418971-011	12-Dec-2024 10:39	0960_MW021_241212	✓		✓
EP2418971-012	12-Dec-2024 12:50	0960_MW113_241212	✓		✓
EP2418971-013	12-Dec-2024 11:22	0960_MW114_241212	✓		✓
EP2418971-014	13-Dec-2024 11:01	0960_MW211_241212	✓		✓
EP2418971-015	12-Dec-2024 15:30	0960_MW148D_241212	✓		✓
EP2418971-016	12-Dec-2024 15:30	0960_MW148S_241212	✓		✓
EP2418971-017	11-Dec-2024 08:37	0960_MW146A_241211	✓		✓
EP2418971-018	12-Dec-2024 07:53	0960_MW172_241212	✓		✓
EP2418971 019	12 Dec 2024 08 13	0960_MW170_241212	✓		✓
EP2418971-020	12-Dec-2024 08:32	0960_MW127_241212	✓		✓
EP2418971-021	12-Dec-2024 09:00	0960_MW126_241212	✓		✓
EP2418971-022	12-Dec-2024 09:24	0960_MW102_241212	✓		✓
EP2418971-023	12-Dec-2024 14:44	0960_MW104_241212	✓		✓
EP2418971-024	12-Dec-2024 10:15	0960_MW124_241212	✓		✓
EP2418971-052	12-Dec-2024 14:36	0960_MW238_241212	✓		✓
EP2418971-053	12-Dec-2024 10:15	0960_QC304_241212	✓		
EP2418971-054	11-Dec-2024 15:57	0960_QC303_241212	✓		
EP2418971-055	10-Dec-2024 14:05	0960_QC302_241210	✓		
EP2418971 056	09 Dec 2024 15 55	0960_QC301_241209	✓		
EP2418971-060	12-Dec-2024 10:15	0960_QC404_241212	✓		
EP2418971-061	11-Dec-2024 15:57	0960_QC403_241211	✓		
EP2418971-062	10-Dec-2024 14:04	0960_QC402_241210	✓		
EP2418971-063	09-Dec-2024 15:55	0960_QC401_241209	✓		
EP2418971-064	12-Dec-2024 09:30	0960_QC104_241212	✓		
EP2418971-065	12-Dec-2024 13:00	0960_QC105_241212	✓		
EP2418971-066	12-Dec-2024 15:50	0960_QC501_241212	✓		
EP2418971-067	13-Dec-2024 08:35	0960_QC502_241213	✓		
EP2418971-068	13-Dec-2024 14:43	0960_MW229_241213		✓	
EP2418971 069	13 Dec 2024 15 09	0960_MW228_241213		✓	
EP2418971-070	13-Dec-2024 15:17	0960_MW227_241213		✓	



Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Accounts Payable Australia

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

DERP LAB REPORTS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]

LAB REPORTS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]



CERTIFICATE OF ANALYSIS

Work Order : EP2418971
Client : GHD PTY LTD
Contact :
Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000
Telephone : ----
Project : 12641234 - PFAS OMP
Order number : 12641234
C-O-C number : 77018
Sampler :
Site : 0960
Quote number : EP24GHDSE0016_V5
No. of samples received : 70
No. of samples analysed : 67

Page : 1 of 36
Laboratory : Environmental Division Perth
Contact : Angel Tam
Address : 26 Rigali Way Wangara WA Australia 6065
Telephone : +61-8-9406 1301
Date Samples Received : 17-Dec-2024 14:25
Date Analysis Commenced : 19-Dec-2024
Issue Date : 06-Jan-2025 14:24



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
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
John Horwood	Organic Supervisor	Perth Organics, Wangara, WA



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
Ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO₂ and Fluoride to the Anions.
- EP231X: High failing LCS deemed acceptable as all associated analytes are <LOR.
- EP231X: Variable matrix spike recovery for particular analytes due to suspected matrix interference.
- Ionic Balance out of acceptable limits for sample #1, 2, 4, 6, 7 and 14 due to analytes not quantified in this report. Total Alkalinity results have been confirmed by re-preparation and re-analysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- 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. 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.
- 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.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW233_241211	0960_MW162_241211	0960_MW164_241211	0960_MW018_241212	0960_MW165_241211
Sampling date / time					11-Dec-2024 15:25	11-Dec-2024 15:57	11-Dec-2024 15:10	12-Dec-2024 11:49	11-Dec-2024 14:40
Compound	CAS Number	LOR	Unit	EP2418971-001	EP2418971-002	EP2418971-003	EP2418971-004	EP2418971-005	
				Result	Result	Result	Result	Result	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	20	<1	49	18	7	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	611	458	922	974	672	
Total Alkalinity as CaCO3	----	1	mg/L	631	458	972	992	678	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	39	406	235	138	30	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	193	4680	1330	256	186	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	3	156	9	6	2	
Magnesium	7439-95-4	1	mg/L	2	206	36	8	3	
Sodium	7440-23-5	1	mg/L	339	2000	1080	523	358	
Potassium	7440-09-7	1	mg/L	13	113	48	20	15	
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L	18.9	150	61.8	29.9	19.4	
ø Total Cations	----	0.01	meq/L	15.4	115	51.6	24.2	16.3	
ø Ionic Balance	----	0.01	%	10.1	13.2	9.00	10.5	8.72	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.03	0.15	0.02	0.03	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.09	0.51	0.10	0.10	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.10	0.42	0.08	0.12	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.28	3.33	0.78	1.18	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.15	0.04	0.03	0.04	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.98	0.34	1.14	0.83	0.02	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW233_241211	0960_MW162_241211	0960_MW164_241211	0960_MW018_241212	0960_MW165_241211
Sampling date / time					11-Dec-2024 15:25	11-Dec-2024 15:57	11-Dec-2024 15:10	12-Dec-2024 11:49	11-Dec-2024 14:40
Compound	CAS Number	LOR	Unit	EP2418971-001	EP2418971-002	EP2418971-003	EP2418971-004	EP2418971-005	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	0.2	<0.1	0.8	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.08	0.26	0.06	1.70	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.21	0.86	0.19	1.96	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.03	0.08	0.03	1.66	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.10	0.07	0.03	0.20	<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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW233_241211	0960_MW162_241211	0960_MW164_241211	0960_MW018_241212	0960_MW165_241211
Sampling date / time					11-Dec-2024 15:25	11-Dec-2024 15:57	11-Dec-2024 15:10	12-Dec-2024 11:49	11-Dec-2024 14:40
Compound	CAS Number	LOR	Unit	EP2418971-001	EP2418971-002	EP2418971-003	EP2418971-004	EP2418971-005	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	3.05	6.26	2.46	8.62	0.02	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	2.26	3.67	1.92	2.01	0.02	
Sum of PFAS (WA DER List)	----	0.01	µg/L	2.77	5.65	2.33	8.43	0.02	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	112	108	118	110	106	
13C8-PFOA	----	0.02	%	104	102	114	105	104	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW166_241212	0960_MW167_241212	0960_MW168_241212	0960_MW112_241212	0960_MW115_241212
Sampling date / time				12-Dec-2024 13:24	12-Dec-2024 13:35	12-Dec-2024 12:03	12-Dec-2024 13:08	12-Dec-2024 07:30	
Compound	CAS Number	LOR	Unit	EP2418971-006	EP2418971-007	EP2418971-008	EP2418971-009	EP2418971-010	
				Result	Result	Result	Result	Result	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	924	1020	637	738	360	
Total Alkalinity as CaCO3	----	1	mg/L	924	1020	637	738	360	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	151	323	610	1050	1820	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	337	734	3500	2950	11600	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	6	19	147	81	453	
Magnesium	7439-95-4	1	mg/L	7	20	157	109	763	
Sodium	7440-23-5	1	mg/L	530	796	1860	1980	6640	
Potassium	7440-09-7	1	mg/L	24	35	108	115	303	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	31.1	47.8	124	120	372	
∅ Total Cations	----	0.01	meq/L	24.5	38.1	104	102	382	
∅ Ionic Balance	----	0.01	%	11.8	11.3	8.87	8.00	1.28	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.02	<0.02	0.07	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.05	0.09	0.04	0.24	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	0.04	0.09	0.03	0.22	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.28	0.52	0.86	0.41	1.81	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.04	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.21	0.63	0.13	0.54	0.41	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW166_241212	0960_MW167_241212	0960_MW168_241212	0960_MW112_241212	0960_MW115_241212
Sampling date / time				12-Dec-2024 13:24	12-Dec-2024 13:35	12-Dec-2024 12:03	12-Dec-2024 13:08	12-Dec-2024 07:30	
Compound	CAS Number	LOR	Unit	EP2418971-006	EP2418971-007	EP2418971-008	EP2418971-009	EP2418971-010	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.2	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.37	0.12	0.05	<0.02	0.08	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.28	0.17	0.20	0.07	0.44	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.30	0.15	0.02	<0.02	0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.22	0.21	0.03	0.01	0.04	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.03	<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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0960_MW166_241212	0960_MW167_241212	0960_MW168_241212	0960_MW112_241212	0960_MW115_241212
Sampling date / time				12-Dec-2024 13:24	12-Dec-2024 13:35	12-Dec-2024 12:03	12-Dec-2024 13:08	12-Dec-2024 07:30
Compound	CAS Number	LOR	Unit	EP2418971-006	EP2418971-007	EP2418971-008	EP2418971-009	EP2418971-010
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	1.96	1.92	1.49	1.10	3.37
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.49	1.15	0.99	0.95	2.22
Sum of PFAS (WA DER List)	----	0.01	µg/L	1.92	1.85	1.38	1.07	3.04
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	108	107	104	105	107
13C8-PFOA	----	0.02	%	103	107	100	101	104



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW021_241212	0960_MW113_241212	0960_MW114_241212	0960_MW211_241212	0960_MW148D_241212 2
Sampling date / time				12-Dec-2024 10:39	12-Dec-2024 12:50	12-Dec-2024 11:22	13-Dec-2024 11:01	12-Dec-2024 15:30
Compound	CAS Number	LOR	Unit	EP2418971-011	EP2418971-012	EP2418971-013	EP2418971-014	EP2418971-015
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	3	<1	<1	34	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	930	408	471	686	154
Total Alkalinity as CaCO3	----	1	mg/L	933	408	471	720	154
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	111	311	277	36	3700
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	544	3400	2790	136	32700
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	10	225	130	2	1050
Magnesium	7439-95-4	1	mg/L	13	174	111	3	2170
Sodium	7440-23-5	1	mg/L	635	1530	1440	315	19600
Potassium	7440-09-7	1	mg/L	24	70	58	14	962
EN055: Ionic Balance								
☐ Total Anions	----	0.01	meq/L	36.3	110	93.9	19.0	1000
☐ Total Cations	----	0.01	meq/L	29.8	93.9	79.7	14.4	1110
☐ Ionic Balance	----	0.01	%	9.82	8.14	8.14	13.7	5.00
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.05	<0.02	<0.02	0.04	0.38
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.25	<0.02	<0.02	0.10	1.18
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.18	<0.02	<0.02	0.08	0.76
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.18	<0.01	<0.01	0.76	3.50
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	0.04	0.23
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.44	<0.01	<0.01	6.48	1.84



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW021_241212	0960_MW113_241212	0960_MW114_241212	0960_MW211_241212	0960_MW148D_241212 2
Sampling date / time				12-Dec-2024 10:39	12-Dec-2024 12:50	12-Dec-2024 11:22	13-Dec-2024 11:01	12-Dec-2024 15:30	
Compound	CAS Number	LOR	Unit	EP2418971-011	EP2418971-012	EP2418971-013	EP2418971-014	EP2418971-015	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	0.1	0.2	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.11	<0.02	<0.02	0.11	0.28	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.38	<0.02	<0.02	0.24	1.18	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.03	<0.02	<0.02	0.06	0.12	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	<0.01	<0.01	0.06	0.19	
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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW021_241212	0960_MW113_241212	0960_MW114_241212	0960_MW211_241212	0960_MW148D_241212 2
Sampling date / time				12-Dec-2024 10:39	12-Dec-2024 12:50	12-Dec-2024 11:22	13-Dec-2024 11:01	12-Dec-2024 15:30
Compound	CAS Number	LOR	Unit	EP2418971-011	EP2418971-012	EP2418971-013	EP2418971-014	EP2418971-015
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	2.63	<0.01	<0.01	8.07	9.86
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	1.62	<0.01	<0.01	7.24	5.34
Sum of PFAS (WA DER List)	----	0.01	µg/L	2.40	<0.01	<0.01	7.91	8.49
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	105	106	105	109	107
13C8-PFOA	----	0.02	%	106	104	101	95.4	102



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW148S_24121 2	0960_MW146A_24121 1	0960_MW172_241212	0960_MW170_241212	0960_MW127_241212
Sampling date / time				12-Dec-2024 15:30	11-Dec-2024 08:37	12-Dec-2024 07:53	12-Dec-2024 08:13	12-Dec-2024 08:32
Compound	CAS Number	LOR	Unit	EP2418971-016	EP2418971-017	EP2418971-018	EP2418971-019	EP2418971-020
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	631	108	332	225	621
Total Alkalinity as CaCO3	----	1	mg/L	631	108	332	225	621
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1640	5180	2650	1740	2800
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	9550	39700	9110	14000	28000
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	145	1110	282	671	1160
Magnesium	7439-95-4	1	mg/L	572	2750	468	845	1790
Sodium	7440-23-5	1	mg/L	6170	22200	6180	8300	15000
Potassium	7440-09-7	1	mg/L	304	1100	203	222	572
EN055: Ionic Balance								
☐ Total Anions	----	0.01	meq/L	316	1230	319	436	860
☐ Total Cations	----	0.01	meq/L	330	1280	326	470	872
☐ Ionic Balance	----	0.01	%	2.21	1.82	1.21	3.76	0.68
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	2.75	<0.02	0.32	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	7.16	<0.02	0.93	0.04	0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	5.99	<0.02	1.27	0.05	0.05
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	31.7	<0.01	10.2	0.45	0.71
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	2.37	<0.02	0.38	<0.02	0.04
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	13.2	<0.01	4.19	0.02	0.72



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW148S_24121 2	0960_MW146A_24121 1	0960_MW172_241212	0960_MW170_241212	0960_MW127_241212
Sampling date / time					12-Dec-2024 15:30	11-Dec-2024 08:37	12-Dec-2024 07:53	12-Dec-2024 08:13	12-Dec-2024 08:32
Compound	CAS Number	LOR	Unit	EP2418971-016	EP2418971-017	EP2418971-018	EP2418971-019	EP2418971-020	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	2.2	<0.1	0.3	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	3.44	<0.02	0.69	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	14.4	<0.02	3.17	0.05	0.07	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	1.05	<0.02	0.32	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	1.36	<0.01	0.46	<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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW148S_24121 2	0960_MW146A_24121 1	0960_MW172_241212	0960_MW170_241212	0960_MW127_241212
Sampling date / time				12-Dec-2024 15:30	11-Dec-2024 08:37	12-Dec-2024 07:53	12-Dec-2024 08:13	12-Dec-2024 08:32
Compound	CAS Number	LOR	Unit	EP2418971-016	EP2418971-017	EP2418971-018	EP2418971-019	EP2418971-020
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	85.6	<0.01	22.2	0.61	1.65
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	44.9	<0.01	14.4	0.47	1.43
Sum of PFAS (WA DER List)	----	0.01	µg/L	74.5	<0.01	20.3	0.56	1.56
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	107	104	107	104	108
13C8-PFOA	----	0.02	%	104	99.6	98.8	96.9	102



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW126_241212	0960_MW102_241212	0960_MW104_241212	0960_MW124_241212	0960_MW238_241212
Sampling date / time				12-Dec-2024 09:00	12-Dec-2024 09:24	12-Dec-2024 14:44	12-Dec-2024 10:15	12-Dec-2024 14:36	
Compound	CAS Number	LOR	Unit	EP2418971-021	EP2418971-022	EP2418971-023	EP2418971-024	EP2418971-052	
				Result	Result	Result	Result	Result	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	8	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	169	135	220	572	595	
Total Alkalinity as CaCO3	----	1	mg/L	169	135	220	572	603	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	2070	3960	4120	4410	639	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	23700	37800	32100	34700	900	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	1150	1520	876	1050	25	
Magnesium	7439-95-4	1	mg/L	1670	2560	2480	2640	25	
Sodium	7440-23-5	1	mg/L	12700	22100	19500	21200	944	
Potassium	7440-09-7	1	mg/L	618	823	1240	1050	54	
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L	715	1150	996	1080	50.7	
ø Total Cations	----	0.01	meq/L	763	1270	1130	1220	45.7	
ø Ionic Balance	----	0.01	%	3.25	4.85	6.22	5.94	5.17	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.76	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.04	<0.02	2.25	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	2.21	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.06	<0.01	17.5	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	1.40	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	10.5	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW126_241212	0960_MW102_241212	0960_MW104_241212	0960_MW124_241212	0960_MW238_241212
Sampling date / time					12-Dec-2024 09:00	12-Dec-2024 09:24	12-Dec-2024 14:44	12-Dec-2024 10:15	12-Dec-2024 14:36
Compound	CAS Number	LOR	Unit	EP2418971-021	EP2418971-022	EP2418971-023	EP2418971-024	EP2418971-052	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	1.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	1.99	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	7.24	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.61	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	1.14	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0960_MW126_241212	0960_MW102_241212	0960_MW104_241212	0960_MW124_241212	0960_MW238_241212
Sampling date / time				12-Dec-2024 09:00	12-Dec-2024 09:24	12-Dec-2024 14:44	12-Dec-2024 10:15	12-Dec-2024 14:36
Compound	CAS Number	LOR	Unit	EP2418971-021	EP2418971-022	EP2418971-023	EP2418971-024	EP2418971-052
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	0.10	<0.01	46.8
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.06	<0.01	28.0
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.10	<0.01	42.4
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	108	102	105	110	109
13C8-PFOA	----	0.02	%	101	100	102	95.9	99.7

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC104_241212	0960_QC105_241212	----	----	----
Sampling date / time					12-Dec-2024 09:30	12-Dec-2024 13:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2418971-064	EP2418971-065	-----	-----	-----	
				Result	Result	---	---	---	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	---	---	---	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.07	---	---	---	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.04	---	---	---	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.28	---	---	---	
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	0.23	---	---	---	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	---	---	---	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	---	---	---	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	0.2	---	---	---	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.37	---	---	---	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.33	---	---	---	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.32	---	---	---	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.21	---	---	---	
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 (PFTTrDA)	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									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0960_QC104_241212	0960_QC105_241212	----	----	----
Sampling date / time				12-Dec-2024 09:30	12-Dec-2024 13:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2418971-064	EP2418971-065	-----	-----	-----
				Result	Result	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	---	---	---
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	---	---	---
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	---	---	---
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	---	---	---
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	---	---	---
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	---	---	---
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	---	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	---	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	---	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	---	---	---
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	---	---	---
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	2.05	---	---	---
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	0.51	---	---	---
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	2.01	---	---	---
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	104	102	---	---	---
13C8-PFOA	----	0.02	%	100	98.6	---	---	---

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC304_241212	0960_QC303_241212	0960_QC302_241210	0960_QC301_241209	0960_QC404_241212
Sampling date / time				12-Dec-2024 10:15	11-Dec-2024 15:57	10-Dec-2024 14:05	09-Dec-2024 15:55	12-Dec-2024 10:15	
Compound	CAS Number	LOR	Unit	EP2418971-053	EP2418971-054	EP2418971-055	EP2418971-056	EP2418971-060	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<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	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<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									



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)			Sample ID	0960_QC304_241212	0960_QC303_241212	0960_QC302_241210	0960_QC301_241209	0960_QC404_241212
Sampling date / time				12-Dec-2024 10:15	11-Dec-2024 15:57	10-Dec-2024 14:05	09-Dec-2024 15:55	12-Dec-2024 10:15
Compound	CAS Number	LOR	Unit	EP2418971-053	EP2418971-054	EP2418971-055	EP2418971-056	EP2418971-060
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<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	%	103	105	108	104	108
13C8-PFOA	----	0.02	%	103	103	100	93.9	103

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC403_241211	0960_QC402_241210	0960_QC401_241209	0960_QC501_241212	0960_QC502_241213
Sampling date / time				11-Dec-2024 15:57	10-Dec-2024 14:04	09-Dec-2024 15:55	12-Dec-2024 15:50	13-Dec-2024 08:35	
Compound	CAS Number	LOR	Unit	EP2418971-061	EP2418971-062	EP2418971-063	EP2418971-066	EP2418971-067	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<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	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<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									



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)			Sample ID	0960_QC403_241211	0960_QC402_241210	0960_QC401_241209	0960_QC501_241212	0960_QC502_241213
Sampling date / time				11-Dec-2024 15:57	10-Dec-2024 14:04	09-Dec-2024 15:55	12-Dec-2024 15:50	13-Dec-2024 08:35
Compound	CAS Number	LOR	Unit	EP2418971-061	EP2418971-062	EP2418971-063	EP2418971-066	EP2418971-067
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<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	104	105	104
13C8-PFOA	----	0.02	%	92.4	98.8	95.4	97.2	97.7

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD199_241212	0960_SD200_241212	0960_SD219_241210	0960_SD108_241211	0960_SD113_241210
Sampling date / time				12-Dec-2024 16:09	12-Dec-2024 15:54	10-Dec-2024 13:41	11-Dec-2024 13:08	10-Dec-2024 11:11	
Compound	CAS Number	LOR	Unit	EP2418971-025	EP2418971-026	EP2418971-027	EP2418971-028	EP2418971-029	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	2.7	4.5	1.0	6.4	1.7	
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	<0.0002	<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	0.0007	<0.0002	0.0013	0.0087	0.0108	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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	<0.0002	<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									



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD199_241212	0960_SD200_241212	0960_SD219_241210	0960_SD108_241211	0960_SD113_241210
Sampling date / time					12-Dec-2024 16:09	12-Dec-2024 15:54	10-Dec-2024 13:41	11-Dec-2024 13:08	10-Dec-2024 11:11
Compound	CAS Number	LOR	Unit	EP2418971-025	EP2418971-026	EP2418971-027	EP2418971-028	EP2418971-029	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0007	<0.0002	0.0013	0.0087	0.0108	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0007	<0.0002	0.0013	0.0087	0.0108	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0007	<0.0002	0.0013	0.0087	0.0108	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	108	112	104	110	108	
13C8-PFOA	----	0.0002	%	95.0	98.5	98.5	99.0	93.5	

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0960_SD114_241210	0960_SD121_241210	0960_SD122_241210	0960_SD123_241210	0960_SD124_241211
Sampling date / time				10-Dec-2024 11:11	10-Dec-2024 08:30	10-Dec-2024 08:35	10-Dec-2024 08:08	11-Dec-2024 11:40
Compound	CAS Number	LOR	Unit	EP2418971-030	EP2418971-031	EP2418971-032	EP2418971-033	EP2418971-034
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	1.3	0.6	1.6	0.7	1.2
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	0.0004	0.0006	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0010	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0083	0.0414	0.0292	0.0170	0.0397
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0006	<0.0002
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0003	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	0.0003	<0.0002	0.0006
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.0002	<0.0002	<0.0002	0.0009
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								



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD114_241210	0960_SD121_241210	0960_SD122_241210	0960_SD123_241210	0960_SD124_241211
Sampling date / time				10-Dec-2024 11:11	10-Dec-2024 08:30	10-Dec-2024 08:35	10-Dec-2024 08:08	11-Dec-2024 11:40	
Compound	CAS Number	LOR	Unit	EP2418971-030	EP2418971-031	EP2418971-032	EP2418971-033	EP2418971-034	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0083	0.0416	0.0309	0.0185	0.0416	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0083	0.0414	0.0296	0.0176	0.0397	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0083	0.0414	0.0296	0.0179	0.0397	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	108	108	102	104	102	
13C8-PFOA	----	0.0002	%	90.5	96.5	97.5	95.5	104	

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD125_241210	0960_SD157_241211	0960_SD166_241211	0960_SD168_241211	0960_SD170_241211
Sampling date / time				10-Dec-2024 08:57	11-Dec-2024 10:58	11-Dec-2024 10:41	11-Dec-2024 10:30	11-Dec-2024 12:21	
Compound	CAS Number	LOR	Unit	EP2418971-035	EP2418971-036	EP2418971-037	EP2418971-038	EP2418971-039	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	0.9	2.7	2.7	3.4	2.2	
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	0.0015	<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	0.0056	0.0051	0.0021	0.0027	0.0050	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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	0.0008	<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	<0.0002	<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									



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0960_SD125_241210	0960_SD157_241211	0960_SD166_241211	0960_SD168_241211	0960_SD170_241211
Sampling date / time				10-Dec-2024 08:57	11-Dec-2024 10:58	11-Dec-2024 10:41	11-Dec-2024 10:30	11-Dec-2024 12:21
Compound	CAS Number	LOR	Unit	EP2418971-035	EP2418971-036	EP2418971-037	EP2418971-038	EP2418971-039
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	0.0056	0.0076	0.0021	0.0027	0.0053
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0056	0.0066	0.0021	0.0027	0.0050
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0056	0.0076	0.0021	0.0027	0.0050
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	100	104	100	100	99.0
13C8-PFOA	----	0.0002	%	99.0	95.5	106	107	108



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD174_241211	0960_SD176_241211	0960_SD190_241211	0960_SD231_241210	0960_SD234_241210
Sampling date / time					11-Dec-2024 11:28	11-Dec-2024 10:00	10-Dec-2024 15:15	10-Dec-2024 11:29	10-Dec-2024 10:21
Compound	CAS Number	LOR	Unit	EP2418971-040	EP2418971-041	EP2418971-042	EP2418971-043	EP2418971-044	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0075	0.0062	0.0447	0.0650	0.0791	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0075	0.0062	0.0441	0.0625	0.0757	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0075	0.0062	0.0441	0.0633	0.0760	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	104	104	80.0	104	114	
13C8-PFOA	----	0.0002	%	110	106	80.0	110	112	

0960 SD278 241210

Sampling date / time				10-Dec-2024 14:05	11-Dec-2024 11:14	10-Dec-2024 12:45	11-Dec-2024 11:39	10-Dec-2024 08:50
Compound	CAS Number	LOR	Unit	EP2418971-045	EP2418971-046	EP2418971-047	EP2418971-048	EP2418971-049
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	1.9	1.7	3.8	1.8	1.7
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	<0.0002	<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	0.0003
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	0.0060	0.0115	0.0073	0.0032	0.0228
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0002	<0.0002	<0.0002	0.0015
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0003	0.0003	<0.0002	<0.0002	0.0012
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	<0.0002	<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								



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD235_241210	0960_SD243_241211	0960_SD265_241210	0960_SD277_241210	0960_SD278_241210
Sampling date / time					10-Dec-2024 14:05	11-Dec-2024 11:14	10-Dec-2024 12:45	11-Dec-2024 11:39	10-Dec-2024 08:50
Compound	CAS Number	LOR	Unit	EP2418971-045	EP2418971-046	EP2418971-047	EP2418971-048	EP2418971-049	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0060	0.0117	0.0073	0.0032	0.0246	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0060	0.0115	0.0073	0.0032	0.0231	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0060	0.0115	0.0073	0.0032	0.0231	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	97.0	104	109	107	120	
13C8-PFOA	----	0.0002	%	110	112	118	112	130	

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD279_241211	0960_SD288_241210	0960_QC101_241210	0960_QC102_241210	0960_QC103_241211
Sampling date / time				11-Dec-2024 10:16	12-Dec-2024 15:40	10-Dec-2024 08:30	10-Dec-2024 13:30	11-Dec-2024 11:00	
Compound	CAS Number	LOR	Unit	EP2418971-050	EP2418971-051	EP2418971-057	EP2418971-058	EP2418971-059	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	1.8	5.2	0.6	1.4	1.7	
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	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0006	<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	0.0068	0.0027	0.0333	0.0011	0.0109	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0015	<0.0002	0.0002	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0020	<0.0002	0.0003	
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	<0.0002	<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									



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD279_241211	0960_SD288_241210	0960_QC101_241210	0960_QC102_241210	0960_QC103_241211
Sampling date / time					11-Dec-2024 10:16	12-Dec-2024 15:40	10-Dec-2024 08:30	10-Dec-2024 13:30	11-Dec-2024 11:00
Compound	CAS Number	LOR	Unit	EP2418971-050	EP2418971-051	EP2418971-057	EP2418971-058	EP2418971-059	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0068	0.0027	0.0356	0.0011	0.0111	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0068	0.0027	0.0339	0.0011	0.0109	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0068	0.0027	0.0341	0.0011	0.0109	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	118	114	108	116	110	
13C8-PFOA	----	0.0002	%	118	116	112	112	114	



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131



QA/QC Compliance Assessment to assist with Quality Review

Work Order : EP2418971

Page : 1 of 16

Client : GHD PTY LTD
Contact :
Project : 12641234 - PFAS OMP
Site : 0960
Sampler :
Order number : 12641234

Laboratory : Environmental Division Perth
Telephone : +61-8-9406 1301
Date Samples Received : 17-Dec-2024
Issue Date : 06-Jan-2025
No. of samples received : 70
No. of samples analysed : 67

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, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- 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							
EP231C: Perfluoroalkyl Sulfonamides	EP2418890--049	Anonymous	Perfluorooctane sulfonamide (FOSA)	754-91-6	133 %	48.0-128%	Recovery greater than upper data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EP2418890--049	Anonymous	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	132 %	60.0-130%	Recovery greater than upper data quality objective
EP231C: Perfluoroalkyl Sulfonamides	EP2418890--049	Anonymous	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	135 %	60.0-130%	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							
EP231C: Perfluoroalkyl Sulfonamides	QC-6288461-002	----	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	149 %	68.0-141%	Recovery greater than upper control limit
EP231C: Perfluoroalkyl Sulfonamides	QC-6288474-002	----	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	152 %	68.0-141%	Recovery greater than upper control limit
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO ₄ 2- by DA	EP2418952--028	Anonymous	Sulfate as SO ₄ - Turbidimetric	14808-79-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
ED045G: Chloride by Discrete Analyser	EP2418952--028	Anonymous	Chloride	16887-00-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EP2418952--008	Anonymous	Perfluorobutanoic acid (PFBA)	375-22-4	146 %	73.0-142%	Recovery greater than upper data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EP2418952--008	Anonymous	Perfluoropentanoic acid (PFPeA)	2706-90-3	48.6 %	72.0-129%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EP2418952--008	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	69.3 %	72.0-129%	Recovery less than lower data quality objective
EP231B: Perfluoroalkyl Carboxylic Acids	EP2418952--008	Anonymous	Perfluoroheptanoic acid (PFHpA)	375-85-9	69.5 %	72.0-130%	Recovery less than lower data quality objective

Outliers : Analysis Holding Time Compliance

Matrix: WATER



Matrix: **WATER**

Method Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
ED093F: Dissolved Major Cations						
Clear Plastic Bottle - Natural 0960_MW233_241211, 0960_MW162_241211, 0960_MW164_241211, 0960_MW165_241211, 0960_MW146A_241211	---	---	---	19-Dec-2024	18-Dec-2024	1

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	2	58	3.45	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	58	1.72	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	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0960_SD121_241210, 0960_SD123_241210,	0960_SD122_241210, 0960_QC101_241210	10-Dec-2024	----	----	----	23-Dec-2024	24-Dec-2024	✓
HDPE Soil Jar (EA055) 0960_SD219_241210, 0960_SD114_241210, 0960_SD190_241211, 0960_SD234_241210, 0960_SD265_241210, 0960_QC102_241210	0960_SD113_241210, 0960_SD125_241210, 0960_SD231_241210, 0960_SD235_241210, 0960_SD278_241210,	10-Dec-2024	----	----	----	24-Dec-2024	24-Dec-2024	✓
HDPE Soil Jar (EA055)								



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C) - Continued								
0960_SD108_241211, 0960_SD157_241211, 0960_SD168_241211, 0960_SD174_241211, 0960_SD243_241211, 0960_SD279_241211,	0960_SD124_241211, 0960_SD166_241211, 0960_SD170_241211, 0960_SD176_241211, 0960_SD277_241210, 0960_QC103_241211	11-Dec-2024	----	----	----	24-Dec-2024	25-Dec-2024	✔
HDPE Soil Jar (EA055) 0960_SD199_241212, 0960_SD288_241210	0960_SD200_241212,	12-Dec-2024	----	----	----	24-Dec-2024	26-Dec-2024	✔
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0960_SD219_241210, 0960_SD114_241210, 0960_SD122_241210, 0960_SD125_241210, 0960_SD231_241210, 0960_SD235_241210, 0960_SD278_241210, 0960_QC102_241210	0960_SD113_241210, 0960_SD121_241210, 0960_SD123_241210, 0960_SD190_241211, 0960_SD234_241210, 0960_SD265_241210, 0960_QC101_241210,	10-Dec-2024	27-Dec-2024	08-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_241211, 0960_SD157_241211, 0960_SD168_241211, 0960_SD174_241211, 0960_SD243_241211, 0960_SD279_241211,	0960_SD124_241211, 0960_SD166_241211, 0960_SD170_241211, 0960_SD176_241211, 0960_SD277_241210, 0960_QC103_241211	11-Dec-2024	27-Dec-2024	09-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_241212, 0960_SD288_241210	0960_SD200_241212,	12-Dec-2024	27-Dec-2024	10-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0960_SD219_241210, 0960_SD114_241210, 0960_SD122_241210, 0960_SD125_241210, 0960_SD231_241210, 0960_SD235_241210, 0960_SD278_241210, 0960_QC102_241210	0960_SD113_241210, 0960_SD121_241210, 0960_SD123_241210, 0960_SD190_241211, 0960_SD234_241210, 0960_SD265_241210, 0960_QC101_241210,	10-Dec-2024	27-Dec-2024	08-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_241211, 0960_SD157_241211, 0960_SD168_241211, 0960_SD174_241211, 0960_SD243_241211, 0960_SD279_241211,	0960_SD124_241211, 0960_SD166_241211, 0960_SD170_241211, 0960_SD176_241211, 0960_SD277_241210, 0960_QC103_241211	11-Dec-2024	27-Dec-2024	09-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_241212, 0960_SD288_241210	0960_SD200_241212,	12-Dec-2024	27-Dec-2024	10-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0960_SD219_241210, 0960_SD114_241210, 0960_SD122_241210, 0960_SD125_241210, 0960_SD231_241210, 0960_SD235_241210, 0960_SD278_241210, 0960_QC102_241210	0960_SD113_241210, 0960_SD121_241210, 0960_SD123_241210, 0960_SD190_241211, 0960_SD234_241210, 0960_SD265_241210, 0960_QC101_241210,	10-Dec-2024	27-Dec-2024	08-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_241211, 0960_SD157_241211, 0960_SD168_241211, 0960_SD174_241211, 0960_SD243_241211, 0960_SD279_241211,	0960_SD124_241211, 0960_SD166_241211, 0960_SD170_241211, 0960_SD176_241211, 0960_SD277_241210, 0960_QC103_241211	11-Dec-2024	27-Dec-2024	09-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_241212, 0960_SD288_241210	0960_SD200_241212,	12-Dec-2024	27-Dec-2024	10-Jun-2025	✔	27-Dec-2024	05-Feb-2025	✔

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.



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	
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211	0960_MW162_241211, 0960_MW165_241211,	11-Dec-2024	----	----	----	19-Dec-2024	25-Dec-2024	✓
Clear Plastic Bottle - Natural (ED037-P) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212,	12-Dec-2024	----	----	----	19-Dec-2024	26-Dec-2024	✓
Clear Plastic Bottle - Natural (ED037-P) 0960_MW211_241212		13-Dec-2024	----	----	----	19-Dec-2024	27-Dec-2024	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
HDPE (no PTFE) (ED041G) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211	0960_MW162_241211, 0960_MW165_241211,	11-Dec-2024	----	----	----	31-Dec-2024	08-Jan-2025	✓
HDPE (no PTFE) (ED041G) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212,	12-Dec-2024	----	----	----	31-Dec-2024	09-Jan-2025	✓
HDPE (no PTFE) (ED041G) 0960_MW211_241212		13-Dec-2024	----	----	----	31-Dec-2024	10-Jan-2025	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
ED045G: Chloride by Discrete Analyser								
HDPE (no PTFE) (ED045G) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211	0960_MW162_241211, 0960_MW165_241211,	11-Dec-2024	----	----	----	31-Dec-2024	08-Jan-2025	✓
HDPE (no PTFE) (ED045G) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212,	12-Dec-2024	----	----	----	31-Dec-2024	09-Jan-2025	✓
HDPE (no PTFE) (ED045G) 0960_MW211_241212		13-Dec-2024	----	----	----	31-Dec-2024	10-Jan-2025	✓
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural (ED093F) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211	0960_MW162_241211, 0960_MW165_241211,	11-Dec-2024	----	----	----	19-Dec-2024	18-Dec-2024	✗
Clear Plastic Bottle - Natural (ED093F) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212,	12-Dec-2024	----	----	----	19-Dec-2024	19-Dec-2024	✓
Clear Plastic Bottle - Natural (ED093F) 0960_MW211_241212		13-Dec-2024	----	----	----	19-Dec-2024	20-Dec-2024	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_QC301_241209,	0960_QC401_241209	09-Dec-2024	30-Dec-2024	07-Jun-2025	✓	31-Dec-2024	07-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_QC302_241210,	0960_QC402_241210	10-Dec-2024	30-Dec-2024	08-Jun-2025	✓	31-Dec-2024	08-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211, 0960_QC403_241211	0960_MW162_241211, 0960_MW165_241211, 0960_QC303_241212,	11-Dec-2024	30-Dec-2024	09-Jun-2025	✓	31-Dec-2024	09-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212, 0960_QC404_241212, 0960_QC105_241212,	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212, 0960_QC304_241212, 0960_QC104_241212, 0960_QC501_241212	12-Dec-2024	30-Dec-2024	10-Jun-2025	✓	31-Dec-2024	10-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW211_241212,	0960_QC502_241213	13-Dec-2024	30-Dec-2024	11-Jun-2025	✓	31-Dec-2024	11-Jun-2025	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0960_QC301_241209,	0960_QC401_241209	09-Dec-2024	30-Dec-2024	07-Jun-2025	✓	31-Dec-2024	07-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_QC302_241210,	0960_QC402_241210	10-Dec-2024	30-Dec-2024	08-Jun-2025	✓	31-Dec-2024	08-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211, 0960_QC403_241211	0960_MW162_241211, 0960_MW165_241211, 0960_QC303_241212,	11-Dec-2024	30-Dec-2024	09-Jun-2025	✓	31-Dec-2024	09-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212, 0960_QC404_241212, 0960_QC105_241212,	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212, 0960_QC304_241212, 0960_QC104_241212, 0960_QC501_241212	12-Dec-2024	30-Dec-2024	10-Jun-2025	✓	31-Dec-2024	10-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW211_241212,	0960_QC502_241213	13-Dec-2024	30-Dec-2024	11-Jun-2025	✓	31-Dec-2024	11-Jun-2025	✓

Page : 11 of 16
 Work Order : EP2418971
 Client : GHD PTY LTD
 Project : 12641234 - PFAS OMP



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0960_QC301_241209,	0960_QC401_241209	09-Dec-2024	30-Dec-2024	07-Jun-2025	✓	31-Dec-2024	07-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_QC302_241210,	0960_QC402_241210	10-Dec-2024	30-Dec-2024	08-Jun-2025	✓	31-Dec-2024	08-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211, 0960_QC403_241211	0960_MW162_241211, 0960_MW165_241211, 0960_QC303_241212,	11-Dec-2024	30-Dec-2024	09-Jun-2025	✓	31-Dec-2024	09-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212, 0960_QC404_241212, 0960_QC105_241212,	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212, 0960_QC304_241212, 0960_QC104_241212, 0960_QC501_241212	12-Dec-2024	30-Dec-2024	10-Jun-2025	✓	31-Dec-2024	10-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW211_241212,	0960_QC502_241213	13-Dec-2024	30-Dec-2024	11-Jun-2025	✓	31-Dec-2024	11-Jun-2025	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_QC301_241209,	0960_QC401_241209	09-Dec-2024	30-Dec-2024	07-Jun-2025	✓	31-Dec-2024	07-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_QC302_241210,	0960_QC402_241210	10-Dec-2024	30-Dec-2024	08-Jun-2025	✓	31-Dec-2024	08-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211, 0960_QC403_241211	0960_MW162_241211, 0960_MW165_241211, 0960_QC303_241212,	11-Dec-2024	30-Dec-2024	09-Jun-2025	✓	31-Dec-2024	09-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212, 0960_QC404_241212, 0960_QC105_241212,	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212, 0960_QC304_241212, 0960_QC104_241212, 0960_QC501_241212	12-Dec-2024	30-Dec-2024	10-Jun-2025	✓	31-Dec-2024	10-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW211_241212,	0960_QC502_241213	13-Dec-2024	30-Dec-2024	11-Jun-2025	✓	31-Dec-2024	11-Jun-2025	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0960_QC301_241209,	0960_QC401_241209	09-Dec-2024	30-Dec-2024	07-Jun-2025	✓	31-Dec-2024	07-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_QC302_241210,	0960_QC402_241210	10-Dec-2024	30-Dec-2024	08-Jun-2025	✓	31-Dec-2024	08-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW233_241211, 0960_MW164_241211, 0960_MW146A_241211, 0960_QC403_241211	0960_MW162_241211, 0960_MW165_241211, 0960_QC303_241212,	11-Dec-2024	30-Dec-2024	09-Jun-2025	✓	31-Dec-2024	09-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW018_241212, 0960_MW167_241212, 0960_MW112_241212, 0960_MW021_241212, 0960_MW114_241212, 0960_MW148S_241212, 0960_MW170_241212, 0960_MW126_241212, 0960_MW104_241212, 0960_MW238_241212, 0960_QC404_241212, 0960_QC105_241212,	0960_MW166_241212, 0960_MW168_241212, 0960_MW115_241212, 0960_MW113_241212, 0960_MW148D_241212, 0960_MW172_241212, 0960_MW127_241212, 0960_MW102_241212, 0960_MW124_241212, 0960_QC304_241212, 0960_QC104_241212, 0960_QC501_241212	12-Dec-2024	30-Dec-2024	10-Jun-2025	✓	31-Dec-2024	10-Jun-2025	✓
HDPE (no PTFE) (EP231X) 0960_MW211_241212,	0960_QC502_241213	13-Dec-2024	30-Dec-2024	11-Jun-2025	✓	31-Dec-2024	11-Jun-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	5	46	10.87	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	40	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	4	37	10.81	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	4	37	10.81	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	4	28	14.29	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	58	3.45	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO ₄ 2- by Discrete Analyser	ED041G	4	37	10.81	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	4	37	10.81	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	4	37	10.81	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	28	7.14	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	58	5.17	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO ₄ 2- by Discrete Analyser	ED041G	4	37	10.81	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Alkalinity by Auto Titrator	ED037-P	2	37	5.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	37	5.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	28	7.14	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	58	5.17	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO ₄ 2- by Discrete Analyser	ED041G	2	37	5.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	2	37	5.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	58	1.72	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO ₄ 2- by Discrete Analyser	ED041G	2	37	5.41	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.
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
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
---------------------	--------	--------	---------------------



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.



QUALITY CONTROL REPORT

Work Order	: EP2418971	Page	: 1 of 22
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 999 HAY STREET PERTH WA, AUSTRALIA 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: 12641234 - PFAS OMP	Date Samples Received	: 17-Dec-2024
Order number	: 12641234	Date Analysis Commenced	: 19-Dec-2024
C-O-C number	: 77018	Issue Date	: 06-Jan-2025
Sampler	: [REDACTED]		
Site	: 0960		
Quote number	: EP24GHDSE0016_V5		
No. of samples received	: 70		
No. of samples analysed	: 67		



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
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
[REDACTED]	Organic Supervisor	Perth Organics, Wangara, WA



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: 6281634)									
EP2418918-001	Anonymous	EA055: Moisture Content	----	0.1	%	25.2	25.6	1.9	0% - 20%
EP2418951-027	Anonymous	EA055: Moisture Content	----	0.1	%	3.1	3.6	13.5	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6282291)									
EP2418971-025	0960_SD199_241212	EA055: Moisture Content	----	0.1	%	2.7	2.7	0.0	0% - 20%
EP2418971-038	0960_SD168_241211	EA055: Moisture Content	----	0.1	%	3.4	3.5	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6282292)									
EP2418971-048	0960_SD277_241210	EA055: Moisture Content	----	0.1	%	1.8	1.9	0.0	0% - 50%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6277588)									
EP2418890-044	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2418971-027	0960_SD219_241210	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	0.0013	0.0012	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



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: 6277591)									
EP2418971-037	0960_SD166_241211	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	0.0021	0.0024	13.7	0% - 50%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2418971-047	0960_SD265_241210	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	0.0073	0.0076	4.4	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6277588)									
EP2418890-044	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0006	0.0006	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	0.0006	29.8	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	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
EP2418971-027	0960_SD219_241210	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: 6277591)									
EP2418971-037	0960_SD166_241211	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
EP2418971-047	0960_SD265_241210	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: 6277588)									
EP2418890-044	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
EP2418971-027	0960_SD219_241210	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: 6277588) - continued									
EP2418971-027	0960_SD219_241210	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: 6277591)									
EP2418971-037	0960_SD166_241211	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
EP2418971-047	0960_SD265_241210	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: 6277588)									
EP2418890-044	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



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: 6277588) - continued									
EP2418890-044	Anonymous	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
EP2418971-027	0960_SD219_241210	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: 6277591)									
EP2418971-037	0960_SD166_241211	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
EP2418971-047	0960_SD265_241210	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
EP231P: PFAS Sums (QC Lot: 6277588)									
EP2418890-044	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0014	0.0012	15.4	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0014	0.0012	15.4	No Limit
EP2418971-027	0960_SD219_241210	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0013	0.0012	8.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0013	0.0012	8.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0013	0.0012	8.0	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 (%)
EP231P: PFAS Sums (QC Lot: 6277591)									
EP2418971-037	0960_SD166_241211	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0021	0.0024	13.3	0% - 50%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0021	0.0024	13.3	0% - 50%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0021	0.0024	13.3	0% - 50%
EP2418971-047	0960_SD265_241210	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0073	0.0076	4.0	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0073	0.0076	4.0	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0073	0.0076	4.0	0% - 20%
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6274058)									
EP2418971-002	0960_MW162_241211	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	458	457	0.2	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	458	457	0.2	0% - 20%
EP2418971-012	0960_MW113_241212	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	408	408	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	408	408	0.0	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 6274067)									
EP2418971-022	0960_MW102_241212	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	135	136	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	135	136	0.0	0% - 20%
EP2419091-004	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	17	17	0.0	0% - 50%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	17	17	0.0	0% - 50%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6277717)									
EP2418971-001	0960_MW233_241211	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	39	38	0.0	0% - 20%
EP2418971-011	0960_MW021_241212	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	111	109	1.4	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6277726)									
EP2418952-028	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1280	1260	2.1	0% - 20%
EP2418971-052	0960_MW238_241212	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	639	647	1.3	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6277718)									
EP2418971-001	0960_MW233_241211	ED045G: Chloride	16887-00-6	1	mg/L	193	196	1.6	0% - 20%
EP2418971-011	0960_MW021_241212	ED045G: Chloride	16887-00-6	1	mg/L	544	547	0.4	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 (%)
ED045G: Chloride by Discrete Analyser (QC Lot: 6277727)									
EP2418952-028	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	9160	9850	7.2	0% - 20%
EP2418971-052	0960_MW238_241212	ED045G: Chloride	16887-00-6	1	mg/L	900	915	1.7	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6273923)									
EP2418971-001	0960_MW233_241211	ED093F: Calcium	7440-70-2	1	mg/L	3	3	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	2	2	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	339	335	1.2	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	13	13	0.0	0% - 50%
EP2418971-011	0960_MW021_241212	ED093F: Calcium	7440-70-2	1	mg/L	10	10	0.0	0% - 50%
		ED093F: Magnesium	7439-95-4	1	mg/L	13	13	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	635	625	1.6	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	24	24	0.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6273924)									
EP2418971-021	0960_MW126_241212	ED093F: Calcium	7440-70-2	1	mg/L	1150	1170	1.7	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	1670	1720	2.8	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	12700	13000	2.5	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	618	643	3.9	0% - 20%
EP2419006-003	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	128	126	1.5	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	162	160	1.5	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	101	102	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	30	30	0.0	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6288461)									
EP2418952-004	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	0.12	0.12	0.0	0% - 50%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375 73 5	0 02	µg/L	0 02	0 02	0 0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6288606)									
EP2418952-028	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	2.05	2.19	6.7	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	5.93	6.49	9.1	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.06	0.10	42.8	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.18	0.19	6.4	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.17	0.19	9.4	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6288606) - continued									
EP2418952-028	Anonymous	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: 6288461)									
EP2418952-004	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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6288606)									
EP2418952-028	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.27	0.30	12.5	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.61	0.71	14.0	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.10	1.34	19.7	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.51	0.55	7.9	0% - 20%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	0.05	0.06	18.5	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	0.4	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6288461)									
EP2418952-004	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

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: 6288461) - continued									
EP2418952-004	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6288606)									
EP2418952-028	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: 6288461)									
EP2418952-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6288606)									
EP2418952-028	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	0.15	0.17	13.2	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	0.10	0.10	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: 6288461)									
EP2418952-004	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.14	0.13	7.4	0% - 50%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.13	0.13	0.0	0% - 50%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.14	0.13	7.4	0% - 50%
EP231P: PFAS Sums (QC Lot: 6288606)									



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: 6288606) - continued									
EP2418952-028	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	11.6	12.9	10.7	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	7.98	8.68	8.4	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	11.2	12.4	10.5	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6277588)								
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	0.00125 mg/kg	92.8	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	110	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	99.1	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	110	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	102	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6277591)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	109	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.4	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	112	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	124	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	105	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	100	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6277588)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	100	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	69.0	132
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	86.4	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	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	96.4	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	98.0	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6277591)								
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	113	69.0	132



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6277591) - continued								
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	112	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	105	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	133	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	95.6	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6277588)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	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	92.6	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	61.9	139
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6277591)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	112	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.6	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	61.9	139
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	119	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6277588)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	106	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	105	64.0	140

ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6277717)



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6277717) - continued								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	102	89.9	112
				<1	500 mg/L	95.6	89.9	112
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6277726)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	101	89.9	112
				<1	500 mg/L	98.3	89.9	112
ED045G: Chloride by Discrete Analyser (QCLot: 6277718)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	103	88.6	113
				<1	1000 mg/L	98.2	88.6	113
ED045G: Chloride by Discrete Analyser (QCLot: 6277727)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	104	88.6	113
				<1	1000 mg/L	102	88.6	113
ED093F: Dissolved Major Cations (QCLot: 6273923)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	102	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	97.7	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	102	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	99.0	84.6	108
ED093F: Dissolved Major Cations (QCLot: 6273924)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	105	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	100	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	105	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	101	84.6	108
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6288461)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	110	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	104	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	107	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	103	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	109	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6288474)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
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	91.2	71.0	127



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6288474) - continued								
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	110	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	111	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	115	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6288606)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	112	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	114	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	111	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	114	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	110	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6288461)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100	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	97.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	109	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	94.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	98.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	107	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6288474)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	108	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	116	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	107	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	87.0	71.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6288474) - continued								
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	111	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6288606)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	107	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	101	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	116	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	97.2	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	108	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	0.25 µg/L	112	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6288461)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	99.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	# 149	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	114	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	134	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	117	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	116	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: 6288474)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	# 152	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	130	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	111	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	124	62.2	138



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
CAS Number	LOR	Unit	Result				Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6288474) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	122	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	110	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6288606)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	102	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	111	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	124	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	118	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6288461)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	119	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	122	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	129	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6288474)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	119	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	114	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	127	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	96.0	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6288606)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	123	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	122	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	127	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: 6288461)								
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	----	----	----	----



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High
EP231P: PFAS Sums (QCLot: 6288474)								
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: 6288606)								
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**

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: 6277588)							
EP2418890-049	Anonymous	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	106	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	104	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	116	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	116	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	122	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	114	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6277591)							
EP2418971-038	0960_SD168_241211	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	102	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	99.8	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	97.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	92.0	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	94.9	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	94.4	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	91.9	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6277588)							
EP2418890-049	Anonymous	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	96.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	98.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	93.8	71.0	131



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6277588) - continued							
EP2418890-049	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	99.0	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	105	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	89.5	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	109	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	99.4	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	108	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6277591)							
EP2418971-038	0960_SD168_241211	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	98.0	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	94.7	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	91.5	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	103	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	91.6	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	103	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	93.5	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	94.3	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6277588)							
EP2418890-049	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	# 133	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	# 132	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	109	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	# 135	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	118	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	117	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	123	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6277591)							
EP2418971-038	0960_SD168_241211	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	111	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	115	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	92.0	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	97.8	60.0	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: 6277591) - continued							
EP2418971-038	0960_SD168_241211	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	114	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	126	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	92.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6277588)							
EP2418890-049	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	115	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	113	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	116	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	119	60.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6277591)							
EP2418971-038	0960_SD168_241211	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	106	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	118	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	108	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	97.8	60.0	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
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6277717)							
EP2418971-001	0960_MW233_241211	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	110	70.4	130
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6277726)							
EP2418952-028	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	# Not Determined	70.4	130
ED045G: Chloride by Discrete Analyser (QCLot: 6277718)							
EP2418971-001	0960_MW233_241211	ED045G: Chloride	16887-00-6	200 mg/L	124	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6277727)							
EP2418952-028	Anonymous	ED045G: Chloride	16887-00-6	200 mg/L	# Not Determined	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6288461)							
EP2418952-008	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	105	72.0	129
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.232 µg/L	116	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	77.9	68.0	129
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	111	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	84.2	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.24 µg/L	104	70.0	135
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	105	53.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6288461)							
EP2418952-008	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	# 146	73.0	142
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	# 48.6	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	# 69.3	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	# 69.5	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	112	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	99.6	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	103	71.0	134
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	95.8	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	117	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	0.25 µg/L	102	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6288461)							
EP2418952-008	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	101	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	98.1	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	81.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	113	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	96.2	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	107	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.6	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6288461)							
EP2418952-008	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	103	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	115	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	120	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	114	70.0	130

CHAIN OF CUSTODY COC#: 77142 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: 20 19/12 <i>Bam</i> DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:										
CLIENT: GHD SER - GHD PTY LTD PROJECT: 12641234 - PFAS OMP SITE: 0960_offsite ORDER NO: 12641234 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO: EMAIL INVOICES TO:				TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:												
SAMPLE DETAILS							ANALYSIS REQUIRED											
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
001	0960_MW230_241213		13/12/2024 02:03 PM	WATER	ALS: 3 Non ALS: 0	No		X		X								
002	0960_MW105_241213		13/12/2024 11:55 AM	WATER	ALS: 3 Non ALS: 0	No		X	X									
003	0960_MW151_241213		13/12/2024 11:32 AM	WATER	ALS: 3 Non ALS: 0	No		X	X									
004	0960_MW122_241213		13/12/2024 06:01 PM	WATER	ALS: 3 Non ALS: 0	No		X	X									
005	0960_MW139_241213		13/12/2024 05:25 PM	WATER	ALS: 3 Non ALS: 0	No		X	X									
006	0960_MW138B_241216		16/12/2024 09:54 AM	WATER	ALS: 3 Non ALS: 0	No		X	X									
007	0960_MW145A_241214		14/12/2024 02:56 PM	WATER	ALS: 3 Non ALS: 0	No		X	X									

Environmental Division
Perth
Work Order Reference
EP2419087



Telephone : - 61-8-9406 1301



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
008	0960_MW103_241213		13/12/2024 12:33 PM	WATER	ALS: 3 Non ALS: 0	No
009	0960_MW134_241213		13/12/2024 04:53 PM	WATER	ALS: 3 Non ALS: 0	No
010	0960_MW135A_241217		17/12/2024 09:54 AM	WATER	ALS: 3 Non ALS: 0	No
011	0960_MW175A_241214		14/12/2024 11:52 AM	WATER	ALS: 3 Non ALS: 0	No
012	0960_MW144A_241217		17/12/2024 09:02 AM	WATER	ALS: 3 Non ALS: 0	No
013	0960_MW143A_241217		17/12/2024 08:33 AM	WATER	ALS: 3 Non ALS: 0	No
014	0960_MW137A_241216		16/12/2024 10:40 AM	WATER	ALS: 3 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Initial-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
	X	X									
	X	X									
	X	X									
	X	X									
	X	X									
	X	X									
	X			X							



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
015	0960_MW176D_241215		15/12/2024 02:19 PM	WATER	ALS: 3 Non ALS: 0	No
016	0960_MW177A_241215		15/12/2024 10:16 AM	WATER	ALS: 3 Non ALS: 0	No
017	0960_MW178A_241216		16/12/2024 03:58 PM	WATER	ALS: 3 Non ALS: 0	No
018	0960_MW179B_241216		16/12/2024 01:30 PM	WATER	ALS: 3 Non ALS: 0	No
019	0960_OTH132_241214		14/12/2024 10:07 AM	WATER	ALS: 3 Non ALS: 0	No
020	0960_OTH134_241214		14/12/2024 10:12 AM	WATER	ALS: 3 Non ALS: 0	No
021	0960_OTH129_241214		14/12/2024 12:18 PM	WATER	ALS: 3 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
	X			X							
	X			X							
	X			X							
	X			X							
								X			X
								X			X
								X			X



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
022	0960_OTH103_241215		15/12/2024 07:57 AM	WATER	ALS: 3 Non ALS: 0	No
023	0960_SW001_241215		15/12/2024 12:44 PM	WATER	ALS: 3 Non ALS: 0	No
024	0960_SW208_241215		15/12/2024 08:26 AM	WATER	ALS: 3 Non ALS: 0	No
025	0960_SW209_241216		16/12/2024 12:32 PM	WATER	ALS: 3 Non ALS: 0	No
026	0960_SW300_241215		15/12/2024 12:49 PM	WATER	ALS: 5 Non ALS: 0	No
027	0960_SW302_241216		16/12/2024 12:07 PM	WATER	ALS: 3 Non ALS: 0	No
028	0960_SW303_241215		15/12/2024 09:00 AM	WATER	ALS: 3 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
								X			X
								X			X
								X			X
								X			X
								X	X	X	
								X	X		
								X	X		



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

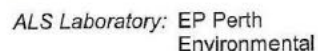
Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
029	0960_SW304_241215		15/12/2024 08:57 AM	WATER	ALS: 3 Non ALS: 0	No
030	0960_SD189_241214		14/12/2024 05:09 PM	SOIL	ALS: 1 Non ALS: 0	No
031	0960_SD192_241214		14/12/2024 10:06 AM	SOIL	ALS: 1 Non ALS: 0	No
032	0960_SD193_241214		14/12/2024 10:05 AM	SOIL	ALS: 1 Non ALS: 0	No
033	0960_SD227_241214		14/12/2024 04:06 PM	SOIL	ALS: 1 Non ALS: 0	No
034	0960_SD291_241214		14/12/2024 04:21 PM	SOIL	ALS: 1 Non ALS: 0	No
035	0960_SD292_241214		14/12/2024 04:38 PM	SOIL	ALS: 1 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water	Groundwater - Major Ions	Groundwater - PFAS	Groundwater - PFAS-LL	Groundwater - SUT PFAS	Intra-Lab Duplicate (PFAS) - Water	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
							X	X			
							X				
							X				
							X				
							X				
							X				



DATE TIME:

EMAIL INVOICES TO:

QUOTE NO: EP24GHDSER0016 / EP2024GHDSER0016

Biohazard info:

·C

Other comments:

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	PFAS ANALYSIS											
							Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
036	0960_SD293_241214		14/12/2024 04:38 PM	SOIL	ALS: 1 Non ALS: 0	No								X				
037	0960_SD208_241215		15/12/2024 08:31 AM	SOIL	ALS: 1 Non ALS: 0	No								X				
038	0960_SD209_241216		16/12/2024 12:34 PM	SOIL	ALS: 1 Non ALS: 0	No								X				
039	0960_SD210_241214		14/12/2024 04:57 PM	SOIL	ALS: 1 Non ALS: 0	No								X				
040	0960_SD301_241215		15/12/2024 11:38 AM	SOIL	ALS: 1 Non ALS: 0	No								X				
041	0960_SD302_241216		16/12/2024 12:08 PM	SOIL	ALS: 1 Non ALS: 0	No								X				
042	0960_SD303_241215		15/12/2024 08:59 AM	SOIL	ALS: 1 Non ALS: 0	No								X				



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
043	0960_SD304_241215		15/12/2024 08:58 AM	SOIL	ALS: 1 Non ALS: 0	No								X				
044	0960_QC503_241213	TRIP BLANK	13/12/2024 08:30 AM	WATER	ALS: 2 Non ALS: 0	No	X											
045	0960_QC405_241213		13/12/2024 11:12 AM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					
046	0960_QC106_241213		13/12/2024 02:45 PM	WATER	ALS: 2 Non ALS: 0	No				X								
047	0960_QC107_241213		13/12/2024 06:07 PM	WATER	ALS: 2 Non ALS: 0	No						X						
048	0960_QC305_241213		13/12/2024 05:45 PM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					
049	0960_QC406_241214		14/12/2024 12:34 PM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSE0016

EMAIL INVOICES TO:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
050	0960_QC306_241214		14/12/2024 12:40 PM	WATER	ALS: 2 Non ALS: 0	No
051	0960_QC108_241214		14/12/2024 04:05 PM	SOIL	ALS: 1 Non ALS: 0	No
052	0960_SD198_241214		14/12/2024 05:01 PM	SOIL	ALS: 1 Non ALS: 0	No
053	0960_QC109_241215		15/12/2024 08:04 AM	WATER	ALS: 2 Non ALS: 0	No
054	0960_MW177C_241215		15/12/2024 10:18 AM	WATER	ALS: 3 Non ALS: 0	No
055	0960_MW177B_241215		15/12/2024 10:20 AM	WATER	ALS: 3 Non ALS: 0	No
056	0960_MW177D_241215		15/12/2024 10:22 AM	WATER	ALS: 3 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
						Partial 1/3					
							X				
							X				
											X
	X				X						
	X				X						
	X				X						



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

CONTACT PH:

SAMPLER MOBILE: 0474 033 452

QUOTE NO: EP24GHDSER0016

/ EP2024GHDSER0016

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
057	0960_QC110_241215		15/12/2024 10:34 AM	WATER	ALS: 2 Non ALS: 0	No					X							
058	0960_QC111_241215		15/12/2024 11:37 AM	SOIL	ALS: 1 Non ALS: 0	No								X				
059	0960_QC407_241215		15/12/2024 11:59 AM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					
060	0960_QC307_241215		15/12/2024 12:00 PM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					
061	0960_QC112_241215		15/12/2024 12:53 PM	WATER	ALS: 2 Non ALS: 0	No										X		
062	0960_MW176B_241215		15/12/2024 02:47 PM	WATER	ALS: 3 Non ALS: 0	No		X			X							
063	0960_MW176C_241215		15/12/2024 03:11 PM	WATER	ALS: 3 Non ALS: 0	No		X			X							



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinstate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
064	0960_MW222_241215		15/12/2024 04:13 PM	WATER	ALS: 3 Non ALS: 0	No		X		X								
065	0960_MW176A_241215		15/12/2024 03:28 PM	WATER	ALS: 3 Non ALS: 0	No		X			X							
066	0960_MW174_241216		16/12/2024 08:36 AM	WATER	ALS: 3 Non ALS: 0	No		X		X								
067	096_QC505_241216		16/12/2024 10:44 AM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					
068	0960_QC308_241216		16/12/2024 10:46 AM	WATER	ALS: 2 Non ALS: 0	No							Partial 1/3					
069	0960_QC408_241216		16/12/2024 10:47 AM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3											
070	0960_MW137B_241216		16/12/2024 10:49 AM	WATER	ALS: 3 Non ALS: 0	No		X			X							



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
071	0960_QC113_241216		16/12/2024 10:50 AM	WATER	ALS: 2 Non ALS: 0	No
072	0960_MW137C_241216		16/12/2024 11:20 AM	WATER	ALS: 3 Non ALS: 0	No
073	0960_MW137D_241216		16/12/2024 11:23 AM	WATER	ALS: 3 Non ALS: 0	No
074	0960_MW179D_241216		16/12/2024 01:44 PM	WATER	ALS: 3 Non ALS: 0	No
075	0960_MW179A_241216		16/12/2024 02:03 PM	WATER	ALS: 3 Non ALS: 0	No
076	0960_MW178D_241216		16/12/2024 04:13 PM	WATER	ALS: 3 Non ALS: 0	No
077	0960_MW178B_241216		16/12/2024 04:19 PM	WATER	ALS: 3 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water	Groundwater - Major Ions	Groundwater - PFAS	Groundwater - PFAS-LL	Groundwater - SUT PFAS	Intra-Lab Duplicate (PFAS) - Water	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL	Surface/Pore Water - SUT PFAS WATER
					X						
	X			X							
	X			X							
	X			X							
	X			X							
	X			X							
	X			X							



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
078	0960_QC114_241216		16/12/2024 04:21 PM	WATER	ALS: 2 Non ALS: 0	No
079	0960_MW178C_241216		16/12/2024 04:53 PM	WATER	ALS: 3 Non ALS: 0	No
080	0960_QC504_241216		16/12/2024 06:36 PM	WATER	ALS: 2 Non ALS: 0	No
081	0960_QC309_241217		17/12/2024 09:55 AM	WATER	ALS: 2 Non ALS: 0	No
082	0960_QC409-241217		17/12/2024 09:56 AM	WATER	ALS: 2 Non ALS: 0	No
083	0960_QC506_241216		16/12/2024 09:58 AM	WATER	ALS: 2 Non ALS: 0	No

ANALYSIS REQUIRED

Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Intra-Lab Duplicate (PFAS) - Water WATER	Rinstate (PFAS) RINSTATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - PFAS-LL WATER	Surface/Pore Water - SUT PFAS WATER
					X						
	X			X							
						Partial 1/3					
						Partial 1/3					
						Partial 1/3					
						Partial 1/3					



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE	SAMPLE NAME	PARTIAL ANALYSIS GROUP NAME	MATRIX	SELECTED ANALYSIS NAME
045	0960_QC405_241213	Rinsate (PFAS) RINSATE	WATER	- EP231X (EP) PFAS - Full Suite (30 analytes)
048	0960_QC305_241213	Rinsate (PFAS) RINSATE	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
049	0960_QC406_241214	Rinsate (PFAS) RINSATE	WATER	- EP231X (EP) PFAS - Full Suite (30 analytes)
050	0960_QC306_241214	Rinsate (PFAS) RINSATE	WATER	- EP231X (EP) PFAS - Full Suite (30 analytes)
059	0960_QC407_241215	Rinsate (PFAS) RINSATE	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
060	0960_QC307_241215	Rinsate (PFAS) RINSATE	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
067	096_QC505_241216	Rinsate (PFAS) RINSATE	WATER	- EP231X (EP) PFAS - Full Suite (30 analytes)
068	0960_QC308_241216	Rinsate (PFAS) RINSATE	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
069	0960_QC408_241216	Field Blank (PFAS) - Water WATER	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
080	0960_QC504_241216	Rinsate (PFAS) RINSATE	WATER	- EP231X (EP) PFAS - Full Suite (30 analytes)
081	0960_QC309_241217	Rinsate (PFAS) RINSATE	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
082	0960_QC409_241217	Rinsate (PFAS) RINSATE	WATER	- EP231X-LL PFAS - Full Suite (31 analytes) Low Level
083	0960_QC506_241216	Rinsate (PFAS) RINSATE	WATER	- EP231X (EP) PFAS - Full Suite (30 analytes)



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0960_MW230_241213	HDPE (no PTFE)	20 mL	00352312075941	Grey	No	
001	0960_MW230_241213	Clear Plastic Bottle - Natural	125 mL	00070823299677	Green	No	
001	0960_MW230_241213	HDPE (no PTFE)	20 mL	00352312076428	Grey	No	
002	0960_MW105_241213	Clear Plastic Bottle - Natural	125 mL	00071122020220	Green	No	
002	0960_MW105_241213	HDPE (no PTFE)	20 mL	00352312076487	Grey	No	
002	0960_MW105_241213	HDPE (no PTFE)	20 mL	00352312076263	Grey	No	
003	0960_MW151_241213	Clear Plastic Bottle - Natural	125 mL	00071122020061	Green	No	
003	0960_MW151_241213	HDPE (no PTFE)	20 mL	00352312075855	Grey	No	
003	0960_MW151_241213	HDPE (no PTFE)	20 mL	00352312075960	Grey	No	
004	0960_MW122_241213	Clear Plastic Bottle - Natural	125 mL	00070823299664	Green	No	
004	0960_MW122_241213	HDPE (no PTFE)	20 mL	00352312076163	Grey	No	
004	0960_MW122_241213	HDPE (no PTFE)	20 mL	00352312076020	Grey	No	
005	0960_MW139_241213	Clear Plastic Bottle - Natural	125 mL	00071122020069	Green	No	
005	0960_MW139_241213	HDPE (no PTFE)	20 mL	00352312076224	Grey	No	
005	0960_MW139_241213	HDPE (no PTFE)	20 mL	00352312076032	Grey	No	
006	0960_MW138B_241216	Clear Plastic Bottle - Natural	125 mL	00070523130720	Green	No	
006	0960_MW138B_241216	HDPE (no PTFE)	20 mL	00352312075717	Grey	No	
006	0960_MW138B_241216	HDPE (no PTFE)	20 mL	00352312076356	Grey	No	
007	0960_MW145A_241214	Clear Plastic Bottle - Natural	125 mL	00071122020206	Green	No	
007	0960_MW145A_241214	HDPE (no PTFE)	20 mL	00352312075763	Grey	No	
007	0960_MW145A_241214	HDPE (no PTFE)	20 mL	00352312076152	Grey	No	
008	0960_MW103_241213	Clear Plastic Bottle - Natural	125 mL	00071122019991	Green	No	
008	0960_MW103_241213	HDPE (no PTFE)	20 mL	00352312075764	Grey	No	
008	0960_MW103_241213	HDPE (no PTFE)	20 mL	00352312075846	Grey	No	
009	0960_MW134_241213	Clear Plastic Bottle - Natural	125 mL	00070823299575	Green	No	
009	0960_MW134_241213	HDPE (no PTFE)	20 mL	00352312075967	Grey	No	



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

009	0960_MW134_241213	HDPE (no PTFE)	20 mL	00352312075796	Grey	No	
010	0960_MW135A_241217	Clear Plastic Bottle - Natural	125 mL	00070523130654	Green	No	
010	0960_MW135A_241217	HDPE (no PTFE)	20 mL	00350522046297	Grey	No	
010	0960_MW135A_241217	HDPE (no PTFE)	20 mL	00350522046358	Grey	No	
011	0960_MW175A_241214	Clear Plastic Bottle - Natural	125 mL	00071122019960	Green	No	
011	0960_MW175A_241214	HDPE (no PTFE)	20 mL	00352312076381	Grey	No	
011	0960_MW175A_241214	HDPE (no PTFE)	20 mL	00352312075720	Grey	No	
012	0960_MW144A_241217	HDPE (no PTFE)	20 mL	00350522046394	Grey	No	
012	0960_MW144A_241217	HDPE (no PTFE)	20 mL	00350522046183	Grey	No	
012	0960_MW144A_241217	Clear Plastic Bottle - Natural	125 mL	00071122019958	Green	No	
013	0960_MW143A_241217	Clear Plastic Bottle - Natural	125 mL	00070523130638	Green	No	
013	0960_MW143A_241217	HDPE (no PTFE)	20 mL	00350522046533	Grey	No	
013	0960_MW143A_241217	HDPE (no PTFE)	20 mL	00350522046205	Grey	No	
014	0960_MW137A_241216	Clear Plastic Bottle - Natural	125 mL	00070523130700	Green	No	
014	0960_MW137A_241216	HDPE (no PTFE)	125 mL	00351223004847	Grey	No	
014	0960_MW137A_241216	HDPE (no PTFE)	125 mL	00351223004793	Grey	No	
015	0960_MW176D_241215	Clear Plastic Bottle - Natural	125 mL	00070823299723	Green	No	
015	0960_MW176D_241215	HDPE (no PTFE)	125 mL	00351223004828	Grey	No	
015	0960_MW176D_241215	HDPE (no PTFE)	125 mL	00351223005003	Grey	No	
016	0960_MW177A_241215	Clear Plastic Bottle - Natural	125 mL	00070523130794	Green	No	
016	0960_MW177A_241215	HDPE (no PTFE)	125 mL	00351223004894	Grey	No	
016	0960_MW177A_241215	HDPE (no PTFE)	125 mL	00351223004848	Grey	No	
017	0960_MW178A_241216	HDPE (no PTFE)	125 mL	00351223004920	Grey	No	
017	0960_MW178A_241216	HDPE (no PTFE)	125 mL	00351223004923	Grey	No	
017	0960_MW178A_241216	Clear Plastic Bottle - Natural	125 mL	00070523130834	Green	No	
018	0960_MW179B_241216	HDPE (no PTFE)	125 mL	00351223004812	Grey	No	
018	0960_MW179B_241216	HDPE (no PTFE)	125 mL	00351223004849	Grey	No	



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

018	0960_MW179B_241216	Clear Plastic Bottle - Natural	125 mL	00070823299713	Green	No	
019	0960_OTH132_241214	Clear Plastic Bottle - Natural	125 mL	00071122020148	Green	No	
019	0960_OTH132_241214	HDPE (no PTFE)	125 mL	00351223004975	Grey	No	
019	0960_OTH132_241214	HDPE (no PTFE)	125 mL	00351223004913	Grey	No	
020	0960_OTH134_241214	Clear Plastic Bottle - Natural	125 mL	00070823299689	Green	No	
020	0960_OTH134_241214	HDPE (no PTFE)	125 mL	00351223004953	Grey	No	
020	0960_OTH134_241214	HDPE (no PTFE)	125 mL	00351223004927	Grey	No	
021	0960_OTH129_241214	Clear Plastic Bottle - Natural	125 mL	00070823299582	Green	No	
021	0960_OTH129_241214	HDPE (no PTFE)	125 mL	00351223005024	Grey	No	
021	0960_OTH129_241214	HDPE (no PTFE)	125 mL	00351223005009	Grey	No	
022	0960_OTH103_241215	Clear Plastic Bottle - Natural	125 mL	00070523130691	Green	No	
022	0960_OTH103_241215	HDPE (no PTFE)	125 mL	00351223004988	Grey	No	
022	0960_OTH103_241215	HDPE (no PTFE)	125 mL	00351223004919	Grey	No	
023	0960_SW001_241215	Clear Plastic Bottle - Natural	125 mL	00070523130643	Green	No	
023	0960_SW001_241215	HDPE (no PTFE)	125 mL	00351223004921	Grey	No	
023	0960_SW001_241215	HDPE (no PTFE)	125 mL	00351223004874	Grey	No	
024	0960_SW208_241215	HDPE (no PTFE)	125 mL	00351223004959	Grey	No	
024	0960_SW208_241215	HDPE (no PTFE)	125 mL	00351223004957	Grey	No	
024	0960_SW208_241215	Clear Plastic Bottle - Natural	125 mL	00070523130694	Green	No	
025	0960_SW209_241216	Clear Plastic Bottle - Natural	125 mL	00070523130656	Green	No	
025	0960_SW209_241216	HDPE (no PTFE)	125 mL	00351223004881	Grey	No	
025	0960_SW209_241216	HDPE (no PTFE)	125 mL	00351223004979	Grey	No	
026	0960_SW300_241215	HDPE (no PTFE)	20 mL	00352312075826	Grey	No	
026	0960_SW300_241215	HDPE (no PTFE)	20 mL	00352307116188	Grey	No	
026	0960_SW300_241215	HDPE (no PTFE)	20 mL	00352312076234	Grey	No	
026	0960_SW300_241215	HDPE (no PTFE)	20 mL	00352312076193	Grey	No	
026	0960_SW300_241215	Clear Plastic Bottle - Natural	125 mL	00070523130633	Green	No	



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

027	0960_SW302_241216	Clear Plastic Bottle - Natural	125 mL	00071122020071	Green	No	
027	0960_SW302_241216	HDPE (no PTFE)	20 mL	00352312075896	Grey	No	
027	0960_SW302_241216	HDPE (no PTFE)	20 mL	00352312076094	Grey	No	
028	0960_SW303_241215	Clear Plastic Bottle - Natural	125 mL	00070523130793	Green	No	
028	0960_SW303_241215	HDPE (no PTFE)	20 mL	00352312076049	Grey	No	
028	0960_SW303_241215	HDPE (no PTFE)	20 mL	00352312076051	Grey	No	
028	0960_SW303_241215	HDPE (no PTFE)	20 mL	00350522046496	Grey	No	
029	0960_SW304_241215	HDPE (no PTFE)	20 mL	00350522046496	Grey	No	
029	0960_SW304_241215	Clear Plastic Bottle - Natural	125 mL	00070523130637	Green	No	
029	0960_SW304_241215	HDPE (no PTFE)	20 mL	00350522046330	Grey	No	
029	0960_SW304_241215	HDPE (no PTFE)	200 mL	00620724014411	Grey	No	
030	0960_SD189_241214	HDPE Soil Jar	200 mL	00620724014549	Grey	No	
031	0960_SD192_241214	HDPE Soil Jar	200 mL	00620724014464	Grey	No	
032	0960_SD193_241214	HDPE Soil Jar	200 mL	00620724014488	Grey	No	
033	0960_SD227_241214	HDPE Soil Jar	200 mL	00620724014494	Grey	No	
034	0960_SD291_241214	HDPE Soil Jar	200 mL	00620724014505	Grey	No	
035	0960_SD292_241214	HDPE Soil Jar	200 mL	00620724014485	Grey	No	
036	0960_SD293_241214	HDPE Soil Jar	200 mL	00620724014467	Grey	No	
037	0960_SD208_241215	HDPE Soil Jar	200 mL	00620724014454	Grey	No	
038	0960_SD209_241216	HDPE Soil Jar	200 mL	00620724014421	Grey	No	
039	0960_SD210_241214	HDPE Soil Jar	200 mL	00620724014451	Grey	No	
040	0960_SD301_241215	HDPE Soil Jar	200 mL	00620724014434	Grey	No	
041	0960_SD302_241216	HDPE Soil Jar	200 mL	00620724014506	Grey	No	
042	0960_SD303_241215	HDPE Soil Jar	200 mL	00620724014508	Grey	No	
043	0960_SD304_241215	HDPE Soil Jar	200 mL	00620724014508	Grey	No	
044	0960_QC503_241213	HDPE (no PTFE)	20 mL	00352312060681	Grey	No	
044	0960_QC503_241213	HDPE (no PTFE)	20 mL	00352312060966	Grey	No	
045	0960_QC405_241213	HDPE (no PTFE)	20 mL	00352312075862	Grey	No	
045	0960_QC405_241213	HDPE (no PTFE)	20 mL	00352312076600	Grey	No	



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

046	0960_QC106_241213	HDPE (no PTFE)	20 mL	00352312075906	Grey	No	
046	0960_QC106_241213	HDPE (no PTFE)	20 mL	00352312075947	Grey	No	
047	0960_QC107_241213	HDPE (no PTFE)	20 mL	00352312076462	Grey	No	
047	0960_QC107_241213	HDPE (no PTFE)	20 mL	00352312076277	Grey	No	
048	0960_QC305_241213	HDPE (no PTFE)	20 mL	00352312076602	Grey	No	
048	0960_QC305_241213	HDPE (no PTFE)	20 mL	00352312075812	Grey	No	
049	0960_QC406_241214	HDPE (no PTFE)	20 mL	00352312075900	Grey	No	
049	0960_QC406_241214	HDPE (no PTFE)	20 mL	00352312076007	Grey	No	
050	0960_QC306_241214	HDPE (no PTFE)	20 mL	00352312076145	Grey	No	
050	0960_QC306_241214	HDPE (no PTFE)	20 mL	00352312076218	Grey	No	
051	0960_QC108_241214	HDPE Soil Jar	200 mL	00620724014523	Grey	No	
052	0960_SD198_241214	HDPE Soil Jar	200 mL	00620724014416	Grey	No	
053	0960_QC109_241215	HDPE (no PTFE)	125 mL	00351223004796	Grey	No	
053	0960_QC109_241215	HDPE (no PTFE)	125 mL	00351223004982	Grey	No	
054	0960_MW177C_241215	HDPE (no PTFE)	125 mL	00351223004858	Grey	No	
054	0960_MW177C_241215	HDPE (no PTFE)	125 mL	00351223004966	Grey	No	
054	0960_MW177C_241215	Clear Plastic Bottle - Natural	125 mL	00070523130839	Green	No	
055	0960_MW177B_241215	Clear Plastic Bottle - Natural	125 mL	00070523130636	Green	No	
055	0960_MW177B_241215	HDPE (no PTFE)	125 mL	00351223004873	Grey	No	
055	0960_MW177B_241215	HDPE (no PTFE)	125 mL	00351223004857	Grey	No	
056	0960_MW177D_241215	Clear Plastic Bottle - Natural	125 mL	00070523130726	Green	No	
056	0960_MW177D_241215	HDPE (no PTFE)	125 mL	00351223004875	Grey	No	
056	0960_MW177D_241215	HDPE (no PTFE)	125 mL	00351223004884	Grey	No	
057	0960_QC110_241215	HDPE (no PTFE)	125 mL	00351223004938	Grey	No	
057	0960_QC110_241215	HDPE (no PTFE)	125 mL	00351223004892	Grey	No	
058	0960_QC111_241215	HDPE Soil Jar	200 mL	00620724014481	Grey	No	
059	0960_QC407_241215	HDPE (no PTFE)	20 mL	00352312076038	Grey	No	



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: 0474 033 452

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

059	0960_QC407_241215	HDPE (no PTFE)	20 mL	00352312075952	Grey	No	
060	0960_QC307_241215	HDPE (no PTFE)	20 mL	00352312075857	Grey	No	
060	0960_QC307_241215	HDPE (no PTFE)	20 mL	00352312076060	Grey	No	
061	0960_QC112_241215	HDPE (no PTFE)	20 mL	00350522046674	Grey	No	
061	0960_QC112_241215	HDPE (no PTFE)	20 mL	00350522046269	Grey	No	
062	0960_MW176B_241215	Clear Plastic Bottle - Natural	125 mL	00070823299725	Green	No	
062	0960_MW176B_241215	HDPE (no PTFE)	125 mL	00351223005002	Grey	No	
062	0960_MW176B_241215	HDPE (no PTFE)	125 mL	00351223004972	Grey	No	
063	0960_MW176C_241215	Clear Plastic Bottle - Natural	125 mL	00070823299799	Green	No	
063	0960_MW176C_241215	HDPE (no PTFE)	125 mL	00351223005047	Grey	No	
063	0960_MW176C_241215	HDPE (no PTFE)	125 mL	00351223004901	Grey	No	
064	0960_MW222_241215	Clear Plastic Bottle - Natural	125 mL	00070823299740	Green	No	
064	0960_MW222_241215	HDPE (no PTFE)	20 mL	00352312076567	Grey	No	
064	0960_MW222_241215	HDPE (no PTFE)	20 mL	00352312076239	Grey	No	
065	0960_MW176A_241215	HDPE (no PTFE)	125 mL	00351223004915	Grey	No	
065	0960_MW176A_241215	HDPE (no PTFE)	125 mL	00351223004916	Grey	No	
065	0960_MW176A_241215	Clear Plastic Bottle - Natural	125 mL	00070523130761	Green	No	
066	0960_MW174_241216	Clear Plastic Bottle - Natural	125 mL	00071122020025	Green	No	
066	0960_MW174_241216	HDPE (no PTFE)	20 mL	00352312075751	Grey	No	
066	0960_MW174_241216	HDPE (no PTFE)	20 mL	00352312075882	Grey	No	
067	096_QC505_241216	HDPE (no PTFE)	125 mL	00352302001249	Grey	No	
067	096_QC505_241216	HDPE (no PTFE)	125 mL	00352302001420	Grey	No	
068	0960_QC308_241216	HDPE (no PTFE)	20 mL	00352312075891	Grey	No	
068	0960_QC308_241216	HDPE (no PTFE)	20 mL	00352312076085	Grey	No	
069	0960_QC408_241216	HDPE (no PTFE)	20 mL	00352312076467	Grey	No	
069	0960_QC408_241216	HDPE (no PTFE)	20 mL	00352312075983	Grey	No	
070	0960_MW137B_241216	HDPE (no PTFE)	125 mL	00351223004886	Grey	No	



CHAIN OF CUSTODY

COC#: 77142

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

CONTACT PH:

SAMPLER MOBILE: 0474 033 452

QUOTE NO: EP24GHD SER0016

/ EP2024GHD SER0016

EMAIL INVOICES TO:

070	0960_MW137B_241216	HDPE (no PTFE)	125 mL	00351223004931	Grey	No	
070	0960_MW137B_241216	Clear Plastic Bottle - Natural	125 mL	00070523130658	Green	No	
071	0960_QC113_241216	HDPE (no PTFE)	125 mL	00351223004897	Grey	No	
071	0960_QC113_241216	HDPE (no PTFE)	125 mL	00351223004905	Grey	No	
072	0960_MW137C_241216	Clear Plastic Bottle - Natural	125 mL	00070523130797	Green	No	
072	0960_MW137C_241216	HDPE (no PTFE)	125 mL	00351223004878	Grey	No	
072	0960_MW137C_241216	HDPE (no PTFE)	125 mL	00351223004842	Grey	No	
073	0960_MW137D_241216	Clear Plastic Bottle - Natural	125 mL	00070523130688	Green	No	
073	0960_MW137D_241216	HDPE (no PTFE)	125 mL	00351223004935	Grey	No	
073	0960_MW137D_241216	HDPE (no PTFE)	125 mL	00351223004888	Grey	No	
073	0960_MW137D_241216	HDPE (no PTFE)	125 mL	00070523130837	Green	No	
074	0960_MW179D_241216	Clear Plastic Bottle - Natural	125 mL	00351223004865	Grey	No	
074	0960_MW179D_241216	HDPE (no PTFE)	125 mL	00351223004882	Grey	No	
074	0960_MW179D_241216	HDPE (no PTFE)	125 mL	00070823299707	Green	No	
075	0960_MW179A_241216	Clear Plastic Bottle - Natural	125 mL	00351223004924	Grey	No	
075	0960_MW179A_241216	HDPE (no PTFE)	125 mL	00351223004922	Grey	No	
075	0960_MW179A_241216	HDPE (no PTFE)	125 mL	00070623196954	Green	No	
076	0960_MW178D_241216	Clear Plastic Bottle - Natural	125 mL	00351223004845	Grey	No	
076	0960_MW178D_241216	HDPE (no PTFE)	125 mL	00351223004891	Grey	No	
076	0960_MW178D_241216	HDPE (no PTFE)	125 mL	00070523130753	Green	No	
077	0960_MW178B_241216	Clear Plastic Bottle - Natural	125 mL	00351223004932	Grey	No	
077	0960_MW178B_241216	HDPE (no PTFE)	125 mL	00351223004898	Grey	No	
077	0960_MW178B_241216	HDPE (no PTFE)	125 mL	00351223004840	Grey	No	
078	0960_QC114_241216	HDPE (no PTFE)	125 mL	00351223004794	Grey	No	
078	0960_QC114_241216	HDPE (no PTFE)	125 mL	00070523130773	Green	No	
079	0960_MW178C_241216	Clear Plastic Bottle - Natural	125 mL	00351223004976	Grey	No	
079	0960_MW178C_241216	HDPE (no PTFE)	125 mL	00351223005044	Grey	No	
079	0960_MW178C_241216	HDPE (no PTFE)	125 mL				



CHAIN OF CUSTODY

COC#: 77142 ALS Laboratory: EP Perth Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_offsite

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comments:

CONTACT PH: SAMPLER MOBILE: 0474 033 452
QUOTE NO: EP24GHD SER0016 / EP2024GHD SER0016

EMAIL INVOICES TO:

080	0960_QC504_241216	HDPE (no PTFE)	125 mL	00352302001281	Grey	No	
080	0960_QC504_241216	HDPE (no PTFE)	125 mL	00352302001338	Grey	No	
081	0960_QC309_241217	HDPE (no PTFE)	20 mL	00350522046597	Grey	No	
081	0960_QC309_241217	HDPE (no PTFE)	20 mL	00350522046677	Grey	No	
082	0960_QC409-241217	HDPE (no PTFE)	20 mL	00350522046760	Grey	No	
082	0960_QC409-241217	HDPE (no PTFE)	20 mL	00350522046193	Grey	No	
083	0960_QC506_241216	HDPE (no PTFE)	125 mL	00351223004866	Grey	No	
083	0960_QC506_241216	HDPE (no PTFE)	125 mL	00351223004965	Grey	No	

Total Bottle Count: ALS: 196, Non ALS: 0



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EP2419087

Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 999 HAY STREET PERTH WA, AUSTRALIA 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
E-mail	: [REDACTED]ghd.com	E-mail	: [REDACTED]alsglobal.com
Telephone	: ----	Telephone	: +61-8-9406 1301
Facsimile	: ----	Facsimile	: +61-8-9406 1399
Project	: 12641234 - PFAS OMP	Page	: 1 of 5
Order number	: 12641234	Quote number	: EP2024GHDSE0016_V5 (EP24GHDSE0016_V5)
C-O-C number	: 77142	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 0960_offsite		
Sampler	: [REDACTED]		

Dates

Date Samples Received	: 19-Dec-2024 08:00	Issue Date	: 08-Jan-2025
Client Requested Due Date	: 08-Jan-2025	Scheduled Reporting Date	: 08-Jan-2025

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 4	Temperature	: 22.3 - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 90 / 90

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 see scanned COC for sample discrepancies: extra samples , samples not received etc.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (Samples.Perth@alsglobal.com)
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Perth, NATA accreditation no. 825, site no. 15847.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **pH analysis should be conducted within 6 hours of sampling.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X-EP (solids) PFAS - Full Suite (30 analytes)
EP2419087-030	14-Dec-2024 17:09	0960_SD189_241214	✓	✓
EP2419087-031	14-Dec-2024 10:06	0960_SD192_241214	✓	✓
EP2419087-032	14-Dec-2024 10:05	0960_SD193_241214	✓	✓
EP2419087-033	14-Dec-2024 16:06	0960_SD227_241214	✓	✓
EP2419087-034	14-Dec-2024 16:21	0960_SD291_241214	✓	✓
EP2419087-035	14-Dec-2024 16:38	0960_SD292_241214	✓	✓
EP2419087-036	14-Dec-2024 16:38	0960_SD293_241214	✓	✓
EP2419087-037	15-Dec-2024 08:31	0960_SD208_241215	✓	✓
EP2419087-038	16-Dec-2024 12:34	0960_SD209_241216	✓	✓
EP2419087-039	14-Dec-2024 16:57	0960_SD210_241214	✓	✓
EP2419087-040	15-Dec-2024 11:38	0960_SD301_241215	✓	✓
EP2419087-041	16-Dec-2024 12:08	0960_SD302_241216	✓	✓
EP2419087-042	15-Dec-2024 08:59	0960_SD303_241215	✓	✓
EP2419087-043	15-Dec-2024 08:58	0960_SD304_241215	✓	✓
EP2419087-051	14-Dec-2024 16:05	0960_QC108_241214	✓	✓
EP2419087-052	14-Dec-2024 17:01	0960_SD198_241214	✓	✓
EP2419087-058	15-Dec-2024 11:37	0960_QC111_241215	✓	✓
EP2419087-089	15-Dec-2024 00:00	0960_SD211_241216	✓	✓
EP2419087-090	15-Dec-2024 00:00	0960_SD300_241215	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30 analytes) NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity
EP2419087-001	13-Dec-2024 14:03	0960_MW230_241213		✓	✓
EP2419087-002	13-Dec-2024 11:55	0960_MW105_241213	✓		✓
EP2419087-003	13-Dec-2024 11:32	0960_MW151_241213	✓		✓
EP2419087-004	13-Dec-2024 18:01	0960_MW122_241213	✓		✓



			WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30 WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity
EP2419087-005	13-Dec-2024 17:25	0960_MW139_241213	✓		✓
EP2419087-006	16-Dec-2024 09:54	0960_MW138B_241216	✓		✓
EP2419087-007	14-Dec-2024 14:56	0960_MW145A_241214	✓		✓
EP2419087-008	13-Dec-2024 12:33	0960_MW103_241213	✓		✓
EP2419087-009	13-Dec-2024 16:53	0960_MW134_241213	✓		✓
EP2419087-010	17-Dec-2024 09:54	0960_MW135A_241217	✓		✓
EP2419087-011	14-Dec-2024 11:52	0960_MW175A_241214	✓		✓
EP2419087-012	17-Dec-2024 09:02	0960_MW144A_241217	✓		✓
EP2419087-013	17-Dec-2024 08:33	0960_MW143A_241217	✓		✓
EP2419087-014	16-Dec-2024 10:40	0960_MW137A_241216			✓
EP2419087-015	15-Dec-2024 14:19	0960_MW176D_241215			✓
EP2419087-016	15-Dec-2024 10:16	0960_MW177A_241215			✓
EP2419087-017	16-Dec-2024 15:58	0960_MW178A_241216			✓
EP2419087-018	16-Dec-2024 13:30	0960_MW179B_241216			✓
EP2419087-019	14-Dec-2024 10:07	0960_OTH132_241214			✓
EP2419087-020	14-Dec-2024 10:12	0960_OTH134_241214			✓
EP2419087-021	14-Dec-2024 12:18	0960_OTH129_241214			✓
EP2419087-022	15-Dec-2024 07:57	0960_OTH103_241215			✓
EP2419087-023	15-Dec-2024 12:44	0960_SW001_241215			✓
EP2419087-024	15-Dec-2024 08:26	0960_SW208_241215			✓
EP2419087-025	16-Dec-2024 12:32	0960_SW209_241216			✓
EP2419087-026	15-Dec-2024 12:49	0960_SW300_241215		✓	✓
EP2419087-027	16-Dec-2024 12:07	0960_SW302_241216	✓		✓
EP2419087-028	15-Dec-2024 09:00	0960_SW303_241215	✓		✓
EP2419087-029	15-Dec-2024 08:57	0960_SW304_241215	✓		✓
EP2419087-044	13-Dec-2024 08:30	0960_QC503_241213		✓	
EP2419087-045	13-Dec-2024 11:12	0960_QC405_241213	✓		
EP2419087-046	13-Dec-2024 14:45	0960_QC106_241213		✓	
EP2419087-047	13-Dec-2024 18:07	0960_QC107_241213	✓		
EP2419087-048	13-Dec-2024 17:45	0960_QC305_241213		✓	
EP2419087-049	14-Dec-2024 12:34	0960_QC406_241214	✓		
EP2419087-050	14-Dec-2024 12:40	0960_QC306_241214	✓		
EP2419087-053	15-Dec-2024 08:04	0960_QC109_241215			✓
EP2419087-054	15-Dec-2024 10:18	0960_MW177C_241215			✓
EP2419087-055	15-Dec-2024 10:20	0960_MW177B_241215			✓
EP2419087-056	15-Dec-2024 10:22	0960_MW177D_241215			✓
EP2419087-057	15-Dec-2024 10:34	0960_QC110_241215			✓
EP2419087-059	15-Dec-2024 11:59	0960_QC407_241215		✓	
EP2419087-060	15-Dec-2024 12:00	0960_QC307_241215		✓	
EP2419087-061	15-Dec-2024 12:53	0960_QC112_241215	✓		
EP2419087-062	15-Dec-2024 14:47	0960_MW176B_241215			✓



			WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30 analytes) NT-01 & 02	Ca, Mg, Na, K, Cl, SO4, Alkalinity
EP2419087-063	15-Dec-2024 15:11	0960_MW176C_241215			✓	✓
EP2419087-064	15-Dec-2024 16:13	0960_MW222_241215		✓		✓
EP2419087-065	15-Dec-2024 15:28	0960_MW176A_241215			✓	✓
EP2419087-066	16-Dec-2024 08:36	0960_MW174_241216		✓		✓
EP2419087-067	16-Dec-2024 10:44	0960_QC505_241216	✓			
EP2419087-068	16-Dec-2024 10:46	0960_QC308_241216		✓		
EP2419087-069	16-Dec-2024 10:47	0960_QC408_241216		✓		
EP2419087-070	16-Dec-2024 10:49	0960_MW137B_241216			✓	✓
EP2419087-071	16-Dec-2024 10:50	0960_QC113_241216			✓	
EP2419087-072	16-Dec-2024 11:20	0960_MW137C_241216			✓	✓
EP2419087-073	16-Dec-2024 11:23	0960_MW137D_241216			✓	✓
EP2419087-074	16-Dec-2024 13:44	0960_MW179D_241216			✓	✓
EP2419087-075	16-Dec-2024 14:03	0960_MW179A_241216			✓	✓
EP2419087-076	16-Dec-2024 16:13	0960_MW178D_241216			✓	✓
EP2419087-077	16-Dec-2024 16:19	0960_MW178B_241216			✓	✓
EP2419087-078	16-Dec-2024 16:21	0960_QC114_241216			✓	
EP2419087-079	16-Dec-2024 16:53	0960_MW178C_241216			✓	✓
EP2419087-080	16-Dec-2024 18:36	0960_QC504_241216	✓			
EP2419087-081	17-Dec-2024 09:55	0960_QC309_241217		✓		
EP2419087-082	17-Dec-2024 09:56	0960_QC409-241217		✓		
EP2419087-083	16-Dec-2024 09:58	0960_QC506_241216	✓			
EP2419087-084	16-Dec-2024 00:00	0960_MW179_241216			✓	✓
EP2419087-085	13-Dec-2024 00:00	0960_MW227_241213				✓
EP2419087-086	13-Dec-2024 00:00	0960_MW228_241213		✓		✓
EP2419087-087	13-Dec-2024 00:00	0960_MW229_241213		✓		✓
EP2419087-088	16-Dec-2024 00:00	0960_SW211_241216			✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

- [illegible]



CERTIFICATE OF ANALYSIS

Work Order	: EP2419087	Page	: 1 of 79
Amendment	: 1		
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: [REDACTED]	Contact	: Angel Tam
Address	: 999 HAY STREET PERTH WA, AUSTRALIA 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: [REDACTED]	Telephone	: +61-8-9406 1301
Project	: 12641234 - PFAS OMP	Date Samples Received	: 19-Dec-2024 08:00
Order number	: 12641234	Date Analysis Commenced	: 23-Dec-2024
C-O-C number	: 77142	Issue Date	: 28-Feb-2025 19:55
Sampler	: [REDACTED]		
Site	: 0960_offsite		
Quote number	: EP24GHDSER0016_V5		
No. of samples received	: 90		
No. of samples analysed	: 90		



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
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
Chris Lemaitre	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
John Horwood	Organic Supervisor	Perth Organics, Wangara, WA
Niamh Carthew	Inorganic Chemist	Perth Inorganics, Wangara, WA



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services, The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
Ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X – Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X – Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- As per QM – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions – Chloride, Alkalinity and Sulfate; and Major Cations – Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP231X: High LCS/Matrix spike recovery deemed acceptable as all associated analytes are <LOR.
- EP231X-SUT: High LCS and surrogate recoveries deemed acceptable as all associated results are <LOR.
- EP231X-SUT: LOR has been raised for particular analytes on certain samples due to matrix interference.
- Amendment (28/02/2025): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EP231X for sample EP2419087_085.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- 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. 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.
- 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.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW230_241213	0960_MW105_241213	0960_MW151_241213	0960_MW122_241213	0960_MW139_241213
Sampling date / time				13-Dec-2024 14:03	13-Dec-2024 11:55	13-Dec-2024 11:32	13-Dec-2024 18:01	13-Dec-2024 17:25	
Compound	CAS Number	LOR	Unit	EP2419087-001	EP2419087-002	EP2419087-003	EP2419087-004	EP2419087-005	
				Result	Result	Result	Result	Result	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	376	434	1190	394	455	
Total Alkalinity as CaCO3	---	1	mg/L	376	434	1190	394	455	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	11	1900	394	2460	3460	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	123	14100	423	14900	19200	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	130	479	11	336	719	
Magnesium	7439-95-4	1	mg/L	8	1120	22	1070	1750	
Sodium	7440-23-5	1	mg/L	59	9040	858	9960	12800	
Potassium	7440-09-7	1	mg/L	4	455	55	471	628	
EN055: Ionic Balance									
∅ Total Anions	---	0,01	meq/L	11.2	446	43.9	479	623	
∅ Total Cations	---	0,01	meq/L	9.81	521	41.1	550	753	
∅ Ionic Balance	---	0,01	%	6.64	7.75	3.32	6.87	9.45	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0,02	µg/L	---	0.07	0.67	<0,02	<0,02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0,002	µg/L	<0.002	---	---	---	---	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0,02	µg/L	---	0.25	2.56	<0,02	<0,02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0,002	µg/L	<0.002	---	---	---	---	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0,02	µg/L	---	0.29	3.52	<0,02	<0,02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0,002	µg/L	<0.002	---	---	---	---	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW230_241213	0960_MW105_241213	0960_MW151_241213	0960_MW122_241213	0960_MW139_241213
Sampling date / time					13-Dec-2024 14:03	13-Dec-2024 11:55	13-Dec-2024 11:32	13-Dec-2024 18:01	13-Dec-2024 17:25
Compound	CAS Number	LOR	Unit	EP2419087-001	EP2419087-002	EP2419087-003	EP2419087-004	EP2419087-005	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	---	1.44	30.1	<0.01	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	---	---	---	---	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	---	0.02	1.51	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	---	---	---	---	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	---	---	---	---	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	---	0.08	17.2	<0.01	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	---	<0.02	<0.08	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	---	<0.02	<0.02	<0.02	<0.02	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	---	---	---	---	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	---	---	---	---	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	---	<0.1	1.5	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	---	---	---	---	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	---	0.07	2.52	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	---	---	---	---	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	---	0.35	12.4	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	---	---	---	---	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	---	0.02	0.96	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	---	---	---	---	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	---	0.02	1.42	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	---	---	---	---	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	---	<0.02	<0.02	<0.02	<0.02	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW230_241213	0960_MW105_241213	0960_MW151_241213	0960_MW122_241213	0960_MW139_241213
Sampling date / time				13-Dec-2024 14:03	13-Dec-2024 11:55	13-Dec-2024 11:32	13-Dec-2024 18:01	13-Dec-2024 17:25
Compound	CAS Number	LOR	Unit	EP2419087-001	EP2419087-002	EP2419087-003	EP2419087-004	EP2419087-005
				Result	Result	Result	Result	Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW230_241213	0960_MW105_241213	0960_MW151_241213	0960_MW122_241213	0960_MW139_241213
Sampling date / time				13-Dec-2024 14:03	13-Dec-2024 11:55	13-Dec-2024 11:32	13-Dec-2024 18:01	13-Dec-2024 17:25
Compound	CAS Number	LOR	Unit	EP2419087-001	EP2419087-002	EP2419087-003	EP2419087-004	EP2419087-005
				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
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05

EP231P: PFAS Sums



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW230_241213	0960_MW105_241213	0960_MW151_241213	0960_MW122_241213	0960_MW139_241213
Sampling date / time					13-Dec-2024 14:03	13-Dec-2024 11:55	13-Dec-2024 11:32	13-Dec-2024 18:01	13-Dec-2024 17:25
Compound	CAS Number	LOR	Unit	EP2419087-001	EP2419087-002	EP2419087-003	EP2419087-004	EP2419087-005	
				Result	Result	Result	Result	Result	
EP231P: PFAS Sums - Continued									
Sum of PFAS	---	0.002	µg/L	<0.002	----	----	----	----	
Sum of PFAS	---	0.01	µg/L	----	2.61	74.4	<0.01	<0.01	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	1.52	47.3	<0.01	<0.01	
Sum of PFAS (WA DER List)	---	0.002	µg/L	<0.002	----	----	----	----	
Sum of PFAS (WA DER List)	---	0.01	µg/L	----	2.23	68.7	<0.01	<0.01	
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.002	%	114	----	----	----	----	
13C4-PFOS	---	0.02	%	----	104	124	104	104	
13C8-PFOA	---	0.002	%	113	----	----	----	----	
13C8-PFOA	---	0.02	%	----	99.5	93.3	103	99.1	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW138B_24121 6	0960_MW145A_24121 4	0960_MW103_241213	0960_MW134_241213	0960_MW135A_24121 7
Sampling date / time				16-Dec-2024 09:54	14-Dec-2024 14:56	13-Dec-2024 12:33	13-Dec-2024 16:53	17-Dec-2024 09:54
Compound	CAS Number	LOR	Unit	EP2419087-006	EP2419087-007	EP2419087-008	EP2419087-009	EP2419087-010
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	179	129	199	205	239
Total Alkalinity as CaCO ₃	—	1	mg/L	179	129	199	205	239
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	4420	5250	2650	3310	1910
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	31100	40400	24600	19200	11400
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	848	996	1340	614	377
Magnesium	7439-95-4	1	mg/L	1790	2450	1890	1520	837
Sodium	7440-23-5	1	mg/L	14400	18900	12700	12900	6470
Potassium	7440-09-7	1	mg/L	779	1130	642	645	347
EN055: Ionic Balance								
∅ Total Anions	—	0.01	meq/L	973	1250	753	615	366
∅ Total Cations	—	0.01	meq/L	836	1100	791	733	378
∅ Ionic Balance	—	0.01	%	7.57	6.34	2.47	8.81	1.60
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.07	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.20	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.08	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.32	<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



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW138B_24121 6	0960_MW145A_24121 4	0960_MW103_241213	0960_MW134_241213	0960_MW135A_24121 7
Sampling date / time					16-Dec-2024 09:54	14-Dec-2024 14:56	13-Dec-2024 12:33	13-Dec-2024 16:53	17-Dec-2024 09:54
Compound	CAS Number	LOR	Unit	EP2419087-006	EP2419087-007	EP2419087-008	EP2419087-009	EP2419087-010	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.08	<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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW138B_24121 6	0960_MW145A_24121 4	0960_MW103_241213	0960_MW134_241213	0960_MW135A_24121 7
Sampling date / time					16-Dec-2024 09:54	14-Dec-2024 14:56	13-Dec-2024 12:33	13-Dec-2024 16:53	17-Dec-2024 09:54
Compound	CAS Number	LOR	Unit	EP2419087-006	EP2419087-007	EP2419087-008	EP2419087-009	EP2419087-010	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	0.77	<0.01	<0.01	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.32	<0.01	<0.01	
Sum of PFAS (WA DER List)	—	0.01	µg/L	<0.01	<0.01	0.62	<0.01	<0.01	
EP231S: PFAS Surrogate									
13C4-PFOS	—	0.02	%	106	105	109	104	106	
13C8-PFOA	—	0.02	%	97.1	102	104	98.4	103	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW175A_24121 4	0960_MW144A_24121 7	0960_MW143A_24121 7	0960_MW137A_24121 6	0960_MW176D_24121 5
Sampling date / time				14-Dec-2024 11:52	17-Dec-2024 09:02	17-Dec-2024 08:33	16-Dec-2024 10:40	15-Dec-2024 14:19
Compound	CAS Number	LOR	Unit	EP2419087-011	EP2419087-012	EP2419087-013	EP2419087-014	EP2419087-015
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	548	203	149	218	1460
Total Alkalinity as CaCO ₃	—	1	mg/L	548	203	149	218	1460
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	255	3310	4570	4060	5030
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	2370	12400	28500	31400	34300
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	65	799	966	626	940
Magnesium	7439-95-4	1	mg/L	371	948	2270	1930	2990
Sodium	7440-23-5	1	mg/L	1160	7210	17800	14500	22700
Potassium	7440-09-7	1	mg/L	58	458	897	852	1100
EN055: Ionic Balance								
∅ Total Anions	—	0.01	meq/L	83.1	423	902	975	1100
∅ Total Cations	—	0.01	meq/L	85.7	443	1030	842	1310
∅ Ionic Balance	—	0.01	%	1.54	2.36	6.73	7.27	8.59
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	----	----	----	<0.0020	<0.0020
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	---	---
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	----	----	----	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	---	---
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	----	----	----	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	---	---



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW175A_24121 4	0960_MW144A_24121 7	0960_MW143A_24121 7	0960_MW137A_24121 6	0960_MW176D_24121 5
Sampling date / time				14-Dec-2024 11:52	17-Dec-2024 09:02	17-Dec-2024 08:33	16-Dec-2024 10:40	15-Dec-2024 14:19
Compound	CAS Number	LOR	Unit	EP2419087-011	EP2419087-012	EP2419087-013	EP2419087-014	EP2419087-015
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	----	----	----	0.0014	0.0017
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	----	----	----	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	----	----	----	0.0015	0.0040
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	----	----	----	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
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	<0.01	----	----
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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW175A_24121 4	0960_MW144A_24121 7	0960_MW143A_24121 7	0960_MW137A_24121 6	0960_MW176D_24121 5
Sampling date / time				14-Dec-2024 11:52	17-Dec-2024 09:02	17-Dec-2024 08:33	16-Dec-2024 10:40	15-Dec-2024 14:19
Compound	CAS Number	LOR	Unit	EP2419087-011	EP2419087-012	EP2419087-013	EP2419087-014	EP2419087-015
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	---	---
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	---	---	---	<0.0020	0.0070
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	---	---	---	<0.0005	0.0007
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	---	---	---	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	---	---	---	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	---	---
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	---	---
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	---	---
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	---	---
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	---	---
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	---	---



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW175A_24121 4	0960_MW144A_24121 7	0960_MW143A_24121 7	0960_MW137A_24121 6	0960_MW176D_24121 5
Sampling date / time				14-Dec-2024 11:52	17-Dec-2024 09:02	17-Dec-2024 08:33	16-Dec-2024 10:40	15-Dec-2024 14:19
Compound	CAS Number	LOR	Unit	EP2419087-011	EP2419087-012	EP2419087-013	EP2419087-014	EP2419087-015
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	---	---
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	---	---	---	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	---	---	---	<0.001	0.001
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	---	---	---	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	---	---	---	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	---	---	---	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	---	---	---	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	---	---	---	<0.0005	<0.0005
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	---	---
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	---	---	---	<0.001	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	---	---	---	<0.001	0.003
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	---	---	---	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	---	---	---	<0.001	<0.001



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW175A_24121 4	0960_MW144A_24121 7	0960_MW143A_24121 7	0960_MW137A_24121 6	0960_MW176D_24121 5
Sampling date / time				14-Dec-2024 11:52	17-Dec-2024 09:02	17-Dec-2024 08:33	16-Dec-2024 10:40	15-Dec-2024 14:19
Compound	CAS Number	LOR	Unit	EP2419087-011	EP2419087-012	EP2419087-013	EP2419087-014	EP2419087-015
				Result	Result	Result	Result	Result
EP231P: PFAS Sums								
Sum of PFAS	—	0.01	µg/L	<0.01	<0.01	<0.01	---	---
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	---	---
Sum of PFAS (WA DER List)	—	0.01	µg/L	<0.01	<0.01	<0.01	---	---
^A Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	---	---	---	0.0029	0.0057
^A Sum of PFAS (WA DER List)	—	0.0002	µg/L	---	---	---	0.0029	0.0164
^A Sum of PFAS	—	0.0002	µg/L	---	---	---	0.0029	0.0174
EP231S: PFAS Surrogate								
13C4-PFOS	—	0.02	%	109	108	107	---	---
13C8-PFOA	—	0.02	%	100	103	105	---	---
13C4-PFOS	—	0.0005	%	---	---	---	129	101
13C8-PFOA	—	0.0005	%	---	---	---	96.5	105



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW177A_24121 5	0960_MW178A_24121 6	0960_MW179B_24121 6	0960_QC106_241213	0960_QC107_241213
Sampling date / time				15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit	EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	---	---
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	---	---
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	169	156	745	---	---
Total Alkalinity as CaCO ₃	---	1	mg/L	169	156	745	---	---
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	4660	5030	3860	---	---
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	35400	33900	28000	---	---
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	868	1070	695	---	---
Magnesium	7439-95-4	1	mg/L	2830	2500	2060	---	---
Sodium	7440-23-5	1	mg/L	22000	18500	15500	---	---
Potassium	7440-09-7	1	mg/L	988	980	967	---	---
EN055: Ionic Balance								
∅ Total Anions	---	0.01	meq/L	1100	1060	885	---	---
∅ Total Cations	---	0.01	meq/L	1260	1090	903	---	---
∅ Ionic Balance	---	0.01	%	6.76	1.15	1.01	---	---
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	---	---
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	---	---	---	---	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	---	---	---	<0.002	---
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	---	---	---	---	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177A_24121 5	0960_MW178A_24121 6	0960_MW179B_24121 6	0960_QC106_241213	0960_QC107_241213
Sampling date / time					15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit	EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	----	<0.002	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	----	----	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0008	<0.0005	<0.0005	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	----	<0.002	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	----	----	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	----	<0.002	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	----	----	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0006	<0.0002	0.0003	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	----	<0.002	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	----	<0.002	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	----	----	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	----	----	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	----	----	<0.02	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	----	<0.01	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	----	<0.01	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	----	----	<0.1	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177A_24121 5	0960_MW178A_24121 6	0960_MW179B_24121 6	0960_QC106_241213	0960_QC107_241213
Sampling date / time					15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit	EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	---	---	---	<0.002	---	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	---	---	---	---	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	---	---	---	<0.002	---	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	---	---	---	---	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	---	---	---	<0.002	---	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	---	---	---	---	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	---	---	---	---	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	---	---	---	---	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	---	---	---	<0.002	---	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	---	---	---	---	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	---	---	---	<0.002	---	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	---	---	---	---	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	---	---	---	---	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	---	---	---	<0.002	---	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	---	---	---	---	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	---	---	---	<0.005	---	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	---	---	---	---	<0.05	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	---	---	---	<0.005	---	
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	0.0034	<0.0020	<0.0020	---	---	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177A_24121 5	0960_MW178A_24121 6	0960_MW179B_24121 6	0960_QC106_241213	0960_QC107_241213
Sampling date / time					15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit	EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0008	<0.0005	<0.0005	---	---	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	---	---	---	<0.002	---	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	---	---	---	---	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	---	---	---	<0.005	---	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	---	---	---	---	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	---	---	---	<0.005	---	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	---	---	---	---	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	---	---	---	<0.005	---	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	---	---	---	---	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	---	---	---	<0.005	---	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177A_24121 5	0960_MW178A_24121 6	0960_MW179B_24121 6	0960_QC106_241213	0960_QC107_241213
Sampling date / time					15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit	EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	---	---	---	---	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	---	---	---	<0.002	---	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	---	---	---	---	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	---	---	---	<0.002	---	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	---	---	---	---	<0.02	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.002	<0.001	<0.001	---	---	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.002	<0.001	<0.001	---	---	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	---	---	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	---	---	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	---	---	---	<0.005	---	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	---	---	---	---	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177A_24121 5	0960_MW178A_24121 6	0960_MW179B_24121 6	0960_QC106_241213	0960_QC107_241213
Sampling date / time					15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit		EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L		---	---	---	<0.005	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		---	---	---	---	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L		---	---	---	<0.005	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		---	---	---	---	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L		---	---	---	<0.005	---
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		---	---	---	---	<0.05
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L		<0.001	<0.001	<0.001	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L		<0.001	<0.001	<0.001	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L		<0.001	<0.001	<0.001	---	---
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L		<0.001	<0.001	<0.001	---	---
EP231P: PFAS Sums									
Sum of PFAS	---	0.002	µg/L		---	---	---	<0.002	---
Sum of PFAS	---	0.01	µg/L		---	---	---	---	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L		---	---	---	<0.002	---
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		---	---	---	---	<0.01
Sum of PFAS (WA DER List)	---	0.002	µg/L		---	---	---	<0.002	---
Sum of PFAS (WA DER List)	---	0.01	µg/L		---	---	---	---	<0.01
^A Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L		0.0014	<0.0002	0.0003	---	---
^A Sum of PFAS (WA DER List)	---	0.0002	µg/L		0.0048	<0.0002	0.0003	---	---
^A Sum of PFAS	---	0.0002	µg/L		0.0048	<0.0002	0.0003	---	---



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177A_24121	0960_MW178A_24121	0960_MW179B_24121	0960_QC106_241213	0960_QC107_241213
					5	6	6		
Sampling date / time					15-Dec-2024 10:16	16-Dec-2024 15:58	16-Dec-2024 13:30	13-Dec-2024 14:45	13-Dec-2024 18:07
Compound	CAS Number	LOR	Unit	EP2419087-016	EP2419087-017	EP2419087-018	EP2419087-046	EP2419087-047	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.002	%	---	---	---	106	---	
13C4-PFOS	---	0.02	%	---	---	---	---	98.5	
13C8-PFOA	---	0.002	%	---	---	---	103	---	
13C8-PFOA	---	0.02	%	---	---	---	---	102	
13C4-PFOS	---	0.0005	%	98.8	128	105	---	---	
13C8-PFOA	---	0.0005	%	96.0	89.8	106	---	---	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW177C_24121 5	0960_MW177B_24121 5	0960_MW177D_24121 5	0960_QC110_241215	0960_MW176B_24121 5
Sampling date / time				15-Dec-2024 10:18	15-Dec-2024 10:20	15-Dec-2024 10:22	15-Dec-2024 10:34	15-Dec-2024 14:47
Compound	CAS Number	LOR	Unit	EP2419087-054	EP2419087-055	EP2419087-056	EP2419087-057	EP2419087-062
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	---	<1
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	---	<1
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	464	205	176	---	284
Total Alkalinity as CaCO ₃	---	1	mg/L	464	205	176	---	284
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	4890	4930	5080	---	2910
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	40600	40800	42600	---	20000
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	861	856	871	---	616
Magnesium	7439-95-4	1	mg/L	2920	2880	2960	---	1470
Sodium	7440-23-5	1	mg/L	22700	22400	23100	---	10900
Potassium	7440-09-7	1	mg/L	1000	989	1020	---	572
EN055: Ionic Balance								
∅ Total Anions	---	0.01	meq/L	1260	1260	1310	---	630
∅ Total Cations	---	0.01	meq/L	1300	1280	1320	---	640
∅ Ionic Balance	---	0.01	%	1.56	0.86	0.26	---	0.79
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0010	0.0010	0.0009	0.0009	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0010	0.0009	0.0011	0.0006	<0.0002



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177C_24121 5	0960_MW177B_24121 5	0960_MW177D_24121 5	0960_QC110_241215	0960_MW176B_24121 5
Sampling date / time					15-Dec-2024 10:18	15-Dec-2024 10:20	15-Dec-2024 10:22	15-Dec-2024 10:34	15-Dec-2024 14:47
Compound	CAS Number	LOR	Unit	EP2419087-054	EP2419087-055	EP2419087-056	EP2419087-057	EP2419087-062	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	0.0026	<0.0020	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.0014	<0.0005	<0.0005	<0.0005	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW177C_24121 5	0960_MW177B_24121 5	0960_MW177D_24121 5	0960_QC110_241215	0960_MW176B_24121 5
Sampling date / time				15-Dec-2024 10:18	15-Dec-2024 10:20	15-Dec-2024 10:22	15-Dec-2024 10:34	15-Dec-2024 14:47
Compound	CAS Number	LOR	Unit	EP2419087-054	EP2419087-055	EP2419087-056	EP2419087-057	EP2419087-062
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EP231P: PFAS Sums								
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0020	0.0019	0.0020	0.0015	<0.0002
^ Sum of PFAS (WA DER List)	—	0.0002	µg/L	0.0020	0.0033	0.0030	0.0041	<0.0002
^ Sum of PFAS	—	0.0002	µg/L	0.0020	0.0033	0.0030	0.0041	<0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	—	0.0005	%	97.9	100	102	111	105
13C8-PFOA	—	0.0005	%	106	96.7	99.8	113	101



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW176C_24121 5	0960_MW222_241215	0960_MW176A_24121 5	0960_MW174_241216	0960_MW137B_24121 6
Sampling date / time				15-Dec-2024 15:11	15-Dec-2024 16:13	15-Dec-2024 15:28	16-Dec-2024 08:36	16-Dec-2024 10:49
Compound	CAS Number	LOR	Unit	EP2419087-063	EP2419087-064	EP2419087-065	EP2419087-066	EP2419087-070
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	378	417	267	400	249
Total Alkalinity as CaCO ₃	—	1	mg/L	378	417	267	400	249
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	4810	3470	3200	148	3660
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	38200	19000	20700	1480	33000
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	927	596	641	251	695
Magnesium	7439-95-4	1	mg/L	2660	1620	1530	103	2310
Sodium	7440-23-5	1	mg/L	20300	10300	11500	676	17500
Potassium	7440-09-7	1	mg/L	999	511	603	22	876
EN055: Ionic Balance								
∅ Total Anions	—	0.01	meq/L	1180	616	656	52.8	1010
∅ Total Cations	—	0.01	meq/L	1170	624	674	51.0	1010
∅ Ionic Balance	—	0.01	%	0.49	0.61	1.33	1.78	0.18
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	----	<0.0020	----	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	0.023	----	<0.002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	0.005	----	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0008	----	<0.0005	---	0.0013



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW176C_24121 5	0960_MW222_241215	0960_MW176A_24121 5	0960_MW174_241216	0960_MW137B_24121 6
Sampling date / time					15-Dec-2024 15:11	15-Dec-2024 16:13	15-Dec-2024 15:28	16-Dec-2024 08:36	16-Dec-2024 10:49
Compound	CAS Number	LOR	Unit	EP2419087-063	EP2419087-064	EP2419087-065	EP2419087-066	EP2419087-070	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	0.020	----	<0.002	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0018	----	<0.0002	----	0.0029	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	0.024	----	<0.002	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	0.01	----	<0.01	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	0.04	----	<0.01	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	0.002	----	<0.002	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	----	<0.005	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW176C_24121 5	0960_MW222_241215	0960_MW176A_24121 5	0960_MW174_241216	0960_MW137B_24121 6
Sampling date / time					15-Dec-2024 15:11	15-Dec-2024 16:13	15-Dec-2024 15:28	16-Dec-2024 08:36	16-Dec-2024 10:49
Compound	CAS Number	LOR	Unit	EP2419087-063	EP2419087-064	EP2419087-065	EP2419087-066	EP2419087-070	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	----	<0.005	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	----	<0.0020	----	<0.0020	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	----	<0.002	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	----	<0.005	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	----	<0.005	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	----	<0.005	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	----	<0.005	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	----	<0.002	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW176C_24121 5	0960_MW222_241215	0960_MW176A_24121 5	0960_MW174_241216	0960_MW137B_24121 6
Sampling date / time					15-Dec-2024 15:11	15-Dec-2024 16:13	15-Dec-2024 15:28	16-Dec-2024 08:36	16-Dec-2024 10:49
Compound	CAS Number	LOR	Unit	EP2419087-063	EP2419087-064	EP2419087-065	EP2419087-066	EP2419087-070	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	----	<0.002	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	----	<0.0005	----	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	----	<0.005	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	----	<0.005	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	----	<0.005	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	----	<0.005	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	----	<0.001	----	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	----	<0.001	----	<0.001	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW176C_24121 5	0960_MW222_241215	0960_MW176A_24121 5	0960_MW174_241216	0960_MW137B_24121 6
Sampling date / time				15-Dec-2024 15:11	15-Dec-2024 16:13	15-Dec-2024 15:28	16-Dec-2024 08:36	16-Dec-2024 10:49
Compound	CAS Number	LOR	Unit	EP2419087-063	EP2419087-064	EP2419087-065	EP2419087-066	EP2419087-070
				Result	Result	Result	Result	Result
EP231P: PFAS Sums								
Sum of PFAS	---	0.002	µg/L	---	0.124	---	<0.002	---
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	---	0.044	---	<0.002	---
Sum of PFAS (WA DER List)	---	0.002	µg/L	---	0.109	---	<0.002	---
^A Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0026	---	<0.0002	---	0.0042
^A Sum of PFAS (WA DER List)	---	0.0002	µg/L	0.0026	---	<0.0002	---	0.0042
^A Sum of PFAS	---	0.0002	µg/L	0.0026	---	<0.0002	---	0.0042
EP231S: PFAS Surrogate								
13C4-PFOS	---	0.002	%	---	111	---	107	---
13C8-PFOA	---	0.002	%	---	103	---	103	---
13C4-PFOS	---	0.0005	%	98.4	---	115	---	126
13C8-PFOA	---	0.0005	%	90.8	---	107	---	97.7



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC113_241216	0960_MW137C_241216	0960_MW137D_241216	0960_MW179D_241216	0960_MW179A_241216
					6	6	6	6
Sampling date / time				16-Dec-2024 10:50	16-Dec-2024 11:20	16-Dec-2024 11:23	16-Dec-2024 13:44	16-Dec-2024 14:03
Compound	CAS Number	LOR	Unit	EP2419087-071	EP2419087-072	EP2419087-073	EP2419087-074	EP2419087-075
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	----	<1	<1	<1	<1
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	----	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	----	475	628	665	191
Total Alkalinity as CaCO ₃	—	1	mg/L	----	475	628	665	191
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	----	4070	3990	3870	3960
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	----	29500	31300	24900	26500
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	----	697	698	613	619
Magnesium	7439-95-4	1	mg/L	----	2200	2250	2100	2180
Sodium	7440-23-5	1	mg/L	----	16800	17000	15600	16200
Potassium	7440-09-7	1	mg/L	----	864	859	960	842
EN055: Ionic Balance								
∅ Total Anions	—	0.01	meq/L	----	926	978	796	834
∅ Total Cations	—	0.01	meq/L	----	969	981	906	936
∅ Ionic Balance	—	0.01	%	----	2.23	0.15	6.48	5.80
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0012	0.0019	0.0016	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0021	0.0084	0.0114	0.0003	0.0002



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC113_241216	0960_MW137C_241216	0960_MW137D_241216	0960_MW179D_241216	0960_MW179A_241216
					6	6	6	6
Sampling date / time				16-Dec-2024 10:50	16-Dec-2024 11:20	16-Dec-2024 11:23	16-Dec-2024 13:44	16-Dec-2024 14:03
Compound	CAS Number	LOR	Unit	EP2419087-071	EP2419087-072	EP2419087-073	EP2419087-074	EP2419087-075
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	0.0022	0.0027	0.0020	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	0.0006	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC113_241216	0960_MW137C_241216	0960_MW137D_241216	0960_MW179D_241216	0960_MW179A_241216
					6	6	6	6
Sampling date / time				16-Dec-2024 10:50	16-Dec-2024 11:20	16-Dec-2024 11:23	16-Dec-2024 13:44	16-Dec-2024 14:03
Compound	CAS Number	LOR	Unit	EP2419087-071	EP2419087-072	EP2419087-073	EP2419087-074	EP2419087-075
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EP231P: PFAS Sums								
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0033	0.0103	0.0130	0.0003	0.0002
^ Sum of PFAS (WA DER List)	—	0.0002	µg/L	0.0033	0.0125	0.0163	0.0023	0.0002
^ Sum of PFAS	—	0.0002	µg/L	0.0033	0.0125	0.0163	0.0023	0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	—	0.0005	%	105	115	91.7	108	118
13C8-PFOA	—	0.0005	%	96.1	104	91.4	98.7	104



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW178D_24121 6	0960_MW178B_24121 6	0960_QC114_241216	0960_MW178C_24121 6	0960_MW179_241216
Sampling date / time				16-Dec-2024 16:13	16-Dec-2024 16:19	16-Dec-2024 16:21	16-Dec-2024 16:53	16-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	EP2419087-076	EP2419087-077	EP2419087-078	EP2419087-079	EP2419087-084
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	----	<1	<1
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	----	<1	<1
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	206	187	----	339	304
Total Alkalinity as CaCO ₃	—	1	mg/L	206	187	----	339	304
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	4810	4820	----	4890	4040
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	30700	29200	----	30400	26300
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	872	1040	----	1060	643
Magnesium	7439-95-4	1	mg/L	2690	2410	----	2550	2240
Sodium	7440-23-5	1	mg/L	19500	17900	----	18900	16600
Potassium	7440-09-7	1	mg/L	996	956	----	993	845
EN055: Ionic Balance								
∅ Total Anions	—	0.01	meq/L	970	928	----	966	832
∅ Total Cations	—	0.01	meq/L	1140	1050	----	1110	960
∅ Ionic Balance	—	0.01	%	7.98	6.34	----	6.94	7.14
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0018	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0026	<0.0002	<0.0002	0.0004	0.0005



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW178D_24121 6	0960_MW178B_24121 6	0960_QC114_241216	0960_MW178C_24121 6	0960_MW179_241216
Sampling date / time				16-Dec-2024 16:13	16-Dec-2024 16:19	16-Dec-2024 16:21	16-Dec-2024 16:53	16-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	EP2419087-076	EP2419087-077	EP2419087-078	EP2419087-079	EP2419087-084
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW178D_24121 6	0960_MW178B_24121 6	0960_QC114_241216	0960_MW178C_24121 6	0960_MW179_241216
Sampling date / time				16-Dec-2024 16:13	16-Dec-2024 16:19	16-Dec-2024 16:21	16-Dec-2024 16:53	16-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	EP2419087-076	EP2419087-077	EP2419087-078	EP2419087-079	EP2419087-084
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EP231P: PFAS Sums								
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0044	<0.0002	<0.0002	0.0004	0.0005
^ Sum of PFAS (WA DER List)	—	0.0002	µg/L	0.0044	<0.0002	<0.0002	0.0004	0.0005
^ Sum of PFAS	—	0.0002	µg/L	0.0044	<0.0002	<0.0002	0.0004	0.0005
EP231S: PFAS Surrogate								
13C4-PFOS	—	0.0005	%	105	107	123	104	105
13C8-PFOA	—	0.0005	%	102	98,5	115	90,9	107



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
Sampling date / time				13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	----	
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----	
				Result	Result	Result	Result	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	358	353	381	221	----	
Total Alkalinity as CaCO3	---	1	mg/L	358	353	381	221	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	16	14	14	4520	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	122	115	87	28500	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	141	137	146	762	----	
Magnesium	7439-95-4	1	mg/L	12	12	8	2400	----	
Sodium	7440-23-5	1	mg/L	62	62	48	17600	----	
Potassium	7440-09-7	1	mg/L	3	3	3	939	----	
EN055: Ionic Balance									
∅ Total Anions	---	0,01	meq/L	10.9	10.6	10.4	902	----	
∅ Total Cations	---	0,01	meq/L	10.8	10.6	10.1	1020	----	
∅ Ionic Balance	---	0,01	%	0.60	0.04	1.22	6.36	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0,0020	µg/L	----	----	----	<0,0020	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0,0005	µg/L	----	----	----	<0,0005	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0,002	µg/L	----	<0,002	<0,002	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0,0005	µg/L	----	----	----	<0,0005	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
Sampling date / time				13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	---
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----
Result				Result	Result	Result	Result	----

EP231A: Perfluoroalkyl Sulfonic Acids - Continued

Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	----	----	----	0.0007	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	----	----	----	<0.0005	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	----	----	----	0.0051	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	<0.01	<0.01	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
Sampling date / time					13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	----
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----	
				Result	Result	Result	Result	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----	
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.005	µg/L	----	<0.005	<0.005	----	----	
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	<0.005	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	----	----	----	0.0054	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
Sampling date / time				13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	---
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----
				Result	Result	Result	Result	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	----	----	----	<0.0005	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	----	----	----	<0.0005	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorotridecanoic acid (PFTeDA)	72629-94-8	0.0005	µg/L	----	----	----	<0.0005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	----	----	----	<0.0005	----

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	<0.005	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	<0.005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	<0.005	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
Sampling date / time				13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	----	
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----	
				Result	Result	Result	Result	----	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	----	----	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	----	----	----	<0.0005	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	----	----	----	<0.001	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	----	----	----	<0.001	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	----	----	----	<0.001	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	----	----	----	<0.001	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	----	----	----	<0.0005	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	----	----	----	<0.0005	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	<0.005	----	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	----	----	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
Sampling date / time				13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	---
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----
Result				Result	Result	Result	Result	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued

6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	<0.005	---	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	---	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	<0.005	---	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	---	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	<0.005	---	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	---	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	----	----	----	<0.001	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	----	----	----	<0.001	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	----	----	----	<0.001	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	----	----	----	<0.001	----

EP231P: PFAS Sums

Sum of PFAS	---	0.002	µg/L	----	<0.002	<0.002	---	----
Sum of PFAS	---	0.01	µg/L	<0.01	----	----	---	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	<0.002	<0.002	---	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	----	----	---	----
Sum of PFAS (WA DER List)	---	0.002	µg/L	----	<0.002	<0.002	---	----
Sum of PFAS (WA DER List)	---	0.01	µg/L	<0.01	----	----	---	----
^A Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	----	----	----	0.0058	----
^A Sum of PFAS (WA DER List)	---	0.0002	µg/L	----	----	----	0.0112	----
^A Sum of PFAS	---	0.0002	µg/L	----	----	----	0.0112	----

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW227_241213	0960_MW228_241213	0960_MW229_241213	0960_SW211_241216	----
				Sampling date / time	13-Dec-2024 00:00	13-Dec-2024 00:00	13-Dec-2024 00:00	16-Dec-2024 00:00	----
Compound	CAS Number	LOR	Unit	EP2419087-085	EP2419087-086	EP2419087-087	EP2419087-088	-----	
				Result	Result	Result	Result	----	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.002	%	----	101	109	----	----	
13C8-PFOA	----	0.002	%	----	95.6	99.7	----	----	
13C4-PFOS	----	0.0005	%	----	----	----	124	----	
13C8-PFOA	----	0.0005	%	----	----	----	106	----	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC503_241213	0960_QC405_241213	0960_QC305_241213	0960_QC406_241214	0960_QC306_241214
Sampling date / time					13-Dec-2024 08:30	13-Dec-2024 11:12	13-Dec-2024 17:45	14-Dec-2024 12:34	14-Dec-2024 12:40
Compound	CAS Number	LOR	Unit	EP2419087-044	EP2419087-045	EP2419087-048	EP2419087-049	EP2419087-050	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	---	<0.02	---	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	---	<0.02	---	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	---	<0.02	---	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	---	<0.01	---	<0.01	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	---	<0.02	---	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	---	<0.01	---	<0.01	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	---	<0.02	---	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	---	<0.02	---	<0.02	<0.02	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	---	<0.01	---	---	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	---	<0.01	---	---	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	---	<0.1	---	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	---	<0.002	---	---	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	---	<0.02	---	<0.02	<0.02	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC503_241213	0960_QC405_241213	0960_QC305_241213	0960_QC406_241214	0960_QC306_241214
Sampling date / time					13-Dec-2024 08:30	13-Dec-2024 11:12	13-Dec-2024 17:45	14-Dec-2024 12:34	14-Dec-2024 12:40
Compound	CAS Number	LOR	Unit	EP2419087-044	EP2419087-045	EP2419087-048	EP2419087-049	EP2419087-050	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	<0.002	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	<0.005	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	<0.005	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	<0.002	----	----	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC503_241213	0960_QC405_241213	0960_QC305_241213	0960_QC406_241214	0960_QC306_241214
Sampling date / time					13-Dec-2024 08:30	13-Dec-2024 11:12	13-Dec-2024 17:45	14-Dec-2024 12:34	14-Dec-2024 12:40
Compound	CAS Number	LOR	Unit		EP2419087-044	EP2419087-045	EP2419087-048	EP2419087-049	EP2419087-050
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	<0.005	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	<0.005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	<0.005	----	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	<0.05	<0.05	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC503_241213	0960_QC405_241213	0960_QC305_241213	0960_QC406_241214	0960_QC306_241214
Sampling date / time					13-Dec-2024 08:30	13-Dec-2024 11:12	13-Dec-2024 17:45	14-Dec-2024 12:34	14-Dec-2024 12:40
Compound	CAS Number	LOR	Unit	EP2419087-044	EP2419087-045	EP2419087-048	EP2419087-049	EP2419087-050	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	<0.005	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	<0.005	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	<0.005	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	<0.002	----	<0.002	----	----	
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	<0.01	<0.01	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	<0.002	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	<0.01	<0.01	
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	<0.002	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	<0.01	<0.01	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	109	----	109	----	----	
13C4-PFOS	----	0.02	%	----	110	----	112	106	
13C8-PFOA	----	0.002	%	106	----	105	----	----	
13C8-PFOA	----	0.02	%	----	106	----	103	103	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC505_241216	0960_QC308_241216	0960_QC408_241216	0960_QC504_241216	0960_QC309_241217
Sampling date / time					16-Dec-2024 10:44	16-Dec-2024 10:46	16-Dec-2024 10:47	16-Dec-2024 18:36	17-Dec-2024 09:55
Compound	CAS Number	LOR	Unit	EP2419087-067	EP2419087-068	EP2419087-069	EP2419087-080	EP2419087-081	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	<0.01	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	<0.01	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	<0.01	<0.01	----	<0.01	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	<0.01	----	<0.01	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	<0.1	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	<0.02	----	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC505_241216	0960_QC308_241216	0960_QC408_241216	0960_QC504_241216	0960_QC309_241217
Sampling date / time					16-Dec-2024 10:44	16-Dec-2024 10:46	16-Dec-2024 10:47	16-Dec-2024 18:36	17-Dec-2024 09:55
Compound	CAS Number	LOR	Unit	EP2419087-067	EP2419087-068	EP2419087-069	EP2419087-080	EP2419087-081	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	<0.01	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	<0.002	----	<0.002	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	<0.02	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	<0.005	----	<0.005	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	<0.05	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	<0.005	----	<0.005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	<0.002	----	<0.002	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC505_241216	0960_QC308_241216	0960_QC408_241216	0960_QC504_241216	0960_QC309_241217
Sampling date / time					16-Dec-2024 10:44	16-Dec-2024 10:46	16-Dec-2024 10:47	16-Dec-2024 18:36	17-Dec-2024 09:55
Compound	CAS Number	LOR	Unit		EP2419087-067	EP2419087-068	EP2419087-069	EP2419087-080	EP2419087-081
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	----	----	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L		----	<0.005	<0.005	----	<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	----	----	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L		----	<0.005	<0.005	----	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	----	----	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L		----	<0.005	<0.005	----	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	----	----	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L		----	<0.005	<0.005	----	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	----	----	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L		----	<0.002	<0.002	----	<0.002
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	----	----	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L		----	<0.002	<0.002	----	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	----	----	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L		----	<0.005	<0.005	----	<0.005
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	----	----	<0.05	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC505_241216	0960_QC308_241216	0960_QC408_241216	0960_QC504_241216	0960_QC309_241217
Sampling date / time					16-Dec-2024 10:44	16-Dec-2024 10:46	16-Dec-2024 10:47	16-Dec-2024 18:36	17-Dec-2024 09:55
Compound	CAS Number	LOR	Unit		EP2419087-067	EP2419087-068	EP2419087-069	EP2419087-080	EP2419087-081
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L		----	<0.005	<0.005	----	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	----	----	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L		----	<0.005	<0.005	----	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	----	----	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L		----	<0.005	<0.005	----	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	<0.05	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L		----	<0.002	<0.002	----	<0.002
Sum of PFAS	----	0.01	µg/L		<0.01	----	----	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L		----	<0.002	<0.002	----	<0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	----	----	<0.01	----
Sum of PFAS (WA DER List)	----	0.002	µg/L		----	<0.002	<0.002	----	<0.002
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	----	----	<0.01	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%		----	103	100	----	108
13C4-PFOS	----	0.02	%		106	----	----	107	----
13C8-PFOA	----	0.002	%		----	103	104	----	104
13C8-PFOA	----	0.02	%		96.9	----	----	102	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC409-241217	0960_QC506_241216	----	----	----
Sampling date / time					17-Dec-2024 09:56	16-Dec-2024 09:58	----	----	----
Compound	CAS Number	LOR	Unit	EP2419087-082	EP2419087-083	-----	-----	-----	
				Result	Result	----	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	<0.02	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	<0.01	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	<0.01	----	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	----	----	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC409-241217	0960_QC506_241216	----	----	----
Sampling date / time					17-Dec-2024 09:56	16-Dec-2024 09:58	----	----	----
Compound	CAS Number	LOR	Unit	EP2419087-082	EP2419087-083	-----	-----	-----	
				Result	Result	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0960_QC409-241217	0960_QC506_241216			
Sampling date / time				17-Dec-2024 09:56	16-Dec-2024 09:58			
Compound	CAS Number	LOR	Unit	EP2419087-082	EP2419087-083			
				Result	Result			

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	----	----

Page : 55 of 79
 Work Order : EP2419087 Amendment 1
 Client : GHD PTY LTD
 Project : 12641234 - PFAS OMP



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC409-241217	0960_QC506_241216	----	----	----
Sampling date / time					17-Dec-2024 09:56	16-Dec-2024 09:58	----	----	----
Compound	CAS Number	LOR	Unit	EP2419087-082	EP2419087-083	-----	-----	-----	
				Result	Result	----	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----	----
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	96.7	----	----	----	----	----
13C4-PFOS	----	0.02	%	----	110	----	----	----	----
13C8-PFOA	----	0.002	%	97.7	----	----	----	----	----
13C8-PFOA	----	0.02	%	----	103	----	----	----	----



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD189_241214	0960_SD192_241214	0960_SD193_241214	0960_SD227_241214	0960_SD291_241214
Sampling date / time					14-Dec-2024 17:09	14-Dec-2024 10:06	14-Dec-2024 10:05	14-Dec-2024 16:06	14-Dec-2024 16:21
Compound	CAS Number	LOR	Unit	EP2419087-030	EP2419087-031	EP2419087-032	EP2419087-033	EP2419087-034	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	—	0.0002	mg/kg	0.0017	<0.0002	0.0008	0.0003	0.0043	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0017	<0.0002	0.0008	0.0003	0.0043	
Sum of PFAS (WA DER List)	—	0.0002	mg/kg	0.0017	<0.0002	0.0008	0.0003	0.0043	
EP231S: PFAS Surrogate									
13C4-PFOS	—	0.0002	%	89.0	105	102	120	91.5	
13C8-PFOA	—	0.0002	%	109	107	100	104	100	



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD292_241214	0960_SD293_241214	0960_SD208_241215	0960_SD209_241216	0960_SD210_241214
Sampling date / time					14-Dec-2024 16:38	14-Dec-2024 16:38	15-Dec-2024 08:31	16-Dec-2024 12:34	14-Dec-2024 16:57
Compound	CAS Number	LOR	Unit	EP2419087-035	EP2419087-036	EP2419087-037	EP2419087-038	EP2419087-039	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	—	0.0002	mg/kg	0.0029	0.0120	<0.0002	<0.0002	0.0032	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0029	0.0120	<0.0002	<0.0002	0.0032	
Sum of PFAS (WA DER List)	—	0.0002	mg/kg	0.0029	0.0120	<0.0002	<0.0002	0.0032	
EP231S: PFAS Surrogate									
13C4-PFOS	—	0.0002	%	92.5	93.0	107	95.0	94.0	
13C8-PFOA	—	0.0002	%	104	102	108	104	102	



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD301_241215	0960_SD302_241216	0960_SD303_241215	0960_SD304_241215	0960_QC108_241214
Sampling date / time					15-Dec-2024 11:38	16-Dec-2024 12:08	15-Dec-2024 08:59	15-Dec-2024 08:58	14-Dec-2024 16:05
Compound	CAS Number	LOR	Unit	EP2419087-040	EP2419087-041	EP2419087-042	EP2419087-043	EP2419087-051	
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	—	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	
Sum of PFAS (WA DER List)	—	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	
EP231S: PFAS Surrogate									
13C4-PFOS	—	0.0002	%	98.5	94.0	108	102	100	
13C8-PFOA	—	0.0002	%	99.0	110	102	104	93.0	



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD198_241214	0960_QC111_241215	0960_SD211_241216	0960_SD300_241215	----
Sampling date / time				14-Dec-2024 17:01	15-Dec-2024 11:37	15-Dec-2024 00:00	15-Dec-2024 00:00	----
Compound	CAS Number	LOR	Unit	EP2419087-052	EP2419087-058	EP2419087-089	EP2419087-090	-----
Result				Result	Result	Result	Result	----

EA055: Moisture Content (Dried @ 105-110°C)

Moisture Content	---	0.1	%	2.2	28.9	28.8	28.4	----
------------------	-----	-----	---	-----	------	------	------	------

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<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	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.0002	0.0009	0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<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	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD198_241214	0960_QC111_241215	0960_SD211_241216	0960_SD300_241215	----
Sampling date / time				14-Dec-2024 17:01	15-Dec-2024 11:37	15-Dec-2024 00:00	15-Dec-2024 00:00	----	
Compound	CAS Number	LOR	Unit	EP2419087-052	EP2419087-058	EP2419087-089	EP2419087-090	-----	
				Result	Result	Result	Result	----	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	<0.0002	0.0002	0.0009	0.0002	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	0.0002	0.0009	0.0002	----	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	0.0002	0.0009	0.0002	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	110	108	116	110	----	
13C8-PFOA	----	0.0002	%	108	106	121	104	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time				15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07	
Compound	CAS Number	LOR	Unit	EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027	
				Result	Result	Result	Result	Result	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	143	148	156	207	173	
Total Alkalinity as CaCO3	---	1	mg/L	143	148	156	207	173	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	3150	2590	2770	3870	2910	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	25200	21400	22500	31300	23600	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	585	465	514	691	530	
Magnesium	7439-95-4	1	mg/L	1820	1580	1590	2200	1650	
Sodium	7440-23-5	1	mg/L	14100	12200	12100	17100	12600	
Potassium	7440-09-7	1	mg/L	641	544	687	923	723	
EN055: Ionic Balance									
∅ Total Anions	---	0.01	meq/L	779	660	695	968	730	
∅ Total Cations	---	0.01	meq/L	809	698	700	983	729	
∅ Ionic Balance	---	0.01	%	1.85	2.74	0.35	0.78	0.07	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	---	---	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	---	---	---	---	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	---	---	---	<0.002	---	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	---	---	---	---	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time					15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07
Compound	CAS Number	LOR	Unit	EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	---	---	---	<0.002	---	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	---	---	---	---	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	---	---	---	<0.002	---	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	---	---	---	---	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	---	---	---	<0.002	---	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	---	---	---	---	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0007	<0.0002	<0.0002	---	---	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	---	---	---	<0.002	---	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	---	---	---	---	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	---	---	---	---	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	---	---	---	---	<0.02	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	---	---	---	<0.01	---	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	---	---	---	<0.01	---	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	---	---	---	---	<0.1	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time					15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07
Compound	CAS Number	LOR	Unit	EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	---	---	---	<0.002	---	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	---	---	---	---	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	---	---	---	<0.002	---	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	---	---	---	---	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	---	---	---	<0.002	---	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	---	---	---	---	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	---	---	---	---	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	---	---	---	---	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	---	---	---	<0.002	---	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	---	---	---	---	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	---	---	---	<0.002	---	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	---	---	---	---	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	---	---	---	<0.002	---	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	---	---	---	---	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	---	---	---	<0.002	---	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	---	---	---	---	<0.02	
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.005	µg/L	---	---	---	<0.005	---	
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	---	---	---	---	<0.05	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	---	---	---	<0.005	---	
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	---	---	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time					15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07
Compound	CAS Number	LOR	Unit		EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L		<0.0005	<0.0005	<0.0005	---	---
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L		---	---	---	<0.002	---
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		---	---	---	---	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L		---	---	---	<0.005	---
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		---	---	---	---	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L		---	---	---	<0.005	---
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		---	---	---	---	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L		---	---	---	<0.005	---
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		---	---	---	---	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L		---	---	---	<0.005	---



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time					15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07
Compound	CAS Number	LOR	Unit	EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	---	---	---	---	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	---	---	---	<0.002	---	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	---	---	---	---	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	---	---	---	<0.002	---	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	---	---	---	---	<0.02	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	---	---	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	---	---	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	---	---	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	---	---	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	---	---	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	---	---	---	<0.005	---	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	---	---	---	---	<0.05	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time				15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07
Compound	CAS Number	LOR	Unit	EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027
				Result	Result	Result	Result	Result

EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued

6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	----	<0.005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	----	----	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	----	<0.005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	----	----	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	----	<0.005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	----	----	<0.05
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	----	----	----	<0.002	----
Sum of PFAS	----	0.01	µg/L	----	----	----	----	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	----	<0.002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	----	----	<0.01
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	----	<0.002	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	----	----	<0.01
^A Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0007	<0.0002	<0.0002	----	----
^A Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0007	<0.0002	<0.0002	----	----
^A Sum of PFAS	----	0.0002	µg/L	0.0007	<0.0002	<0.0002	----	----

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW001_241215	0960_SW208_241215	0960_SW209_241216	0960_SW300_241215	0960_SW302_241216
Sampling date / time					15-Dec-2024 12:44	15-Dec-2024 08:26	16-Dec-2024 12:32	15-Dec-2024 12:49	16-Dec-2024 12:07
Compound	CAS Number	LOR	Unit	EP2419087-023	EP2419087-024	EP2419087-025	EP2419087-026	EP2419087-027	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	---	0.002	%	---	---	---	104	---	
13C4-PFOS	---	0.02	%	---	---	---	---	106	
13C8-PFOA	---	0.002	%	---	---	---	102	---	
13C8-PFOA	---	0.02	%	---	---	---	---	103	
13C4-PFOS	---	0.0005	%	146	116	122	---	---	
13C8-PFOA	---	0.0005	%	108	87.8	94.5	---	---	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW303_241215	0960_SW304_241215	0960_QC112_241215	----	----
Sampling date / time				15-Dec-2024 09:00	15-Dec-2024 08:57	15-Dec-2024 12:53	----	----	
Compound	CAS Number	LOR	Unit	EP2419087-028	EP2419087-029	EP2419087-061	-----	-----	
				Result	Result	Result	----	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	----	----	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	147	155	----	----	----	
Total Alkalinity as CaCO3	----	1	mg/L	147	155	----	----	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	2620	3070	----	----	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	21500	22000	----	----	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	477	491	----	----	----	
Magnesium	7439-95-4	1	mg/L	1620	1620	----	----	----	
Sodium	7440-23-5	1	mg/L	12500	12500	----	----	----	
Potassium	7440-09-7	1	mg/L	557	562	----	----	----	
EN055: Ionic Balance									
∅ Total Anions	----	0,01	meq/L	664	688	----	----	----	
∅ Total Cations	----	0,01	meq/L	715	716	----	----	----	
∅ Ionic Balance	----	0,01	%	3,71	2,02	----	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0,02	µg/L	<0,02	<0,02	<0,02	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0,02	µg/L	<0,02	<0,02	<0,02	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0,02	µg/L	<0,02	<0,02	<0,02	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0,01	µg/L	<0,01	<0,01	<0,01	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0,02	µg/L	<0,02	<0,02	<0,02	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0,01	µg/L	<0,01	<0,01	<0,01	----	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW303_241215	0960_SW304_241215	0960_QC112_241215	----	----
Sampling date / time					15-Dec-2024 09:00	15-Dec-2024 08:57	15-Dec-2024 12:53	---	---
Compound	CAS Number	LOR	Unit		EP2419087-028	EP2419087-029	EP2419087-061	-----	-----
					Result	Result	Result	---	---
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L		<0.02	<0.02	<0.02	---	---
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L		<0.02	<0.02	<0.02	---	---
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	<0.1	---	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	<0.02	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	<0.02	---	---
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	<0.01	---	---
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 (PFTTrDA)	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	---	---
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	---	---

Page : 73 of 79
 Work Order : EP2419087 Amendment 1
 Client : GHD PTY LTD
 Project : 12641234 - PFAS OMP



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW303_241215	0960_SW304_241215	0960_QC112_241215	----	----
Sampling date / time					15-Dec-2024 09:00	15-Dec-2024 08:57	15-Dec-2024 12:53	----	----
Compound	CAS Number	LOR	Unit		EP2419087-028	EP2419087-029	EP2419087-061	-----	-----
				Result	Result	Result	----	----	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	<0.01	<0.01	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	107	106	103	----	----	
13C8-PFOA	----	0.02	%	108	102	102	----	----	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_OTH132_24121 4	0960_OTH134_24121 4	0960_OTH129_24121 4	0960_OTH103_24121 5	0960_QC109_241215
Sampling date / time				14-Dec-2024 10:07	14-Dec-2024 10:12	14-Dec-2024 12:18	15-Dec-2024 07:57	15-Dec-2024 08:04
Compound	CAS Number	LOR	Unit	EP2419087-019	EP2419087-020	EP2419087-021	EP2419087-022	EP2419087-053
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	160	142	124	170	----
Total Alkalinity as CaCO ₃	—	1	mg/L	160	142	124	170	----
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	3000	3000	2540	2460	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	18100	18300	20400	20200	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	472	457	436	433	----
Magnesium	7439-95-4	1	mg/L	1540	1540	1490	1480	----
Sodium	7440-23-5	1	mg/L	12000	11900	11600	11500	----
Potassium	7440-09-7	1	mg/L	554	536	517	510	----
EN055: Ionic Balance								
∅ Total Anions	—	0.01	meq/L	576	582	631	624	----
∅ Total Cations	—	0.01	meq/L	686	681	662	657	----
∅ Ionic Balance	—	0.01	%	8.73	7.87	2.42	2.52	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0014	0.0007	<0.0002	0.0002	0.0002



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_OTH132_24121 4	0960_OTH134_24121 4	0960_OTH129_24121 4	0960_OTH103_24121 5	0960_QC109_241215
Sampling date / time				14-Dec-2024 10:07	14-Dec-2024 10:12	14-Dec-2024 12:18	15-Dec-2024 07:57	15-Dec-2024 08:04
Compound	CAS Number	LOR	Unit	EP2419087-019	EP2419087-020	EP2419087-021	EP2419087-022	EP2419087-053
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0008	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0008	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0008	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.002	<0.001	<0.002	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.002	<0.001	<0.002	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.002	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.002	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_OTH132_24121 4	0960_OTH134_24121 4	0960_OTH129_24121 4	0960_OTH103_24121 5	0960_QC109_241215
Sampling date / time				14-Dec-2024 10:07	14-Dec-2024 10:12	14-Dec-2024 12:18	15-Dec-2024 07:57	15-Dec-2024 08:04
Compound	CAS Number	LOR	Unit	EP2419087-019	EP2419087-020	EP2419087-021	EP2419087-022	EP2419087-053
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0008	<0.0005	<0.0005
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
EP231P: PFAS Sums								
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0014	0.0007	<0.0002	0.0002	0.0002
^ Sum of PFAS (WA DER List)	—	0.0002	µg/L	0.0014	0.0007	<0.0002	0.0002	0.0002
^ Sum of PFAS	—	0.0002	µg/L	0.0014	0.0007	<0.0002	0.0002	0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	—	0.0005	%	99.4	164	106	118	128
13C8-PFOA	—	0.0005	%	103	121	106	92.5	94.5



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_QC407_241215	0960_QC307_241215			
Sampling date / time				15-Dec-2024 11:59	15-Dec-2024 12:00			
Compound	CAS Number	LOR	Unit	EP2419087-059	EP2419087-060			
				Result	Result			

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_QC407_241215	0960_QC307_241215			
Sampling date / time				15-Dec-2024 11:59	15-Dec-2024 12:00			
Compound	CAS Number	LOR	Unit	EP2419087-059	EP2419087-060			
				Result	Result			
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	—	0.002	µg/L	<0.002	<0.002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	----	----	----
Sum of PFAS (WA DER List)	—	0.002	µg/L	<0.002	<0.002	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	—	0.002	%	106	102	----	----	----
13C8-PFOA	—	0.002	%	99.0	104	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	—	76	136
13C8-PFOA	—	78	131

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133
13C4-PFOS	—	65	140
13C8-PFOA	—	71	133



QA/QC Compliance Assessment to assist with Quality Review

Work Order : EP2419087

Page : 1 of 24

Amendment : 1

Client : GHD PTY LTD
Contact :
Project : 12641234 - PFAS OMP
Site : 0960_offsite
Sampler :
Order number : 12641234

Laboratory : Environmental Division Perth
Telephone : +61-8-9406 1301
Date Samples Received : 19-Dec-2024
Issue Date : 28-Feb-2025
No. of samples received : 90
No. of samples analysed : 90

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.
- 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.



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
Laboratory Control Spike (LCS) Recoveries							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	QC-6291292-002	----	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	130 %	54.8-124%	Recovery greater than upper control limit
Matrix Spike (MS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	EP2419087--030	0960_SD189_241214	Perfluoroundecanoic acid (PFUnDA)	2058-94-8	146 %	64.0-136%	Recovery greater than upper data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EP2419087--030	0960_SD189_241214	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	138 %	65.0-137%	Recovery greater than upper data quality objective
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EP2419087--030	0960_SD189_241214	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	135 %	60.0-130%	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							
EP231C: Perfluoroalkyl Sulfonamides	QC-6291718-002	----	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	141 %	61.0-135%	Recovery greater than upper control limit
EP231C: Perfluoroalkyl Sulfonamides	QC-6292774-002	----	N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	49.4 %	68.0-141%	Recovery less than lower control limit
EP231C: Perfluoroalkyl Sulfonamides	QC-6292774-002	----	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	51.8 %	57.9-141%	Recovery less than lower control limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids	QC-6291724-002	----	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	148 %	64.2-133%	Recovery greater than upper control limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids	QC-6292804-002	----	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	146 %	67.0-138%	Recovery greater than upper control limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids	QC-6292804-002	----	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	195 %	53.1-133%	Recovery greater than upper control limit
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO ₄ 2- by DA	EP2419087--021	0960_OTH129_241214	Sulfate as SO ₄ - Turbidimetric	14808-79-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.



Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries - Continued							
ED045G: Chloride by Discrete Analyser	EP2419087--021	0960_OTH129_241214	Chloride	16887-00-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Regular Sample Surrogates

Sub-Matrix: **SURFACE WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP231S: PFAS Surrogate	EP2419087-023	0960_SW001_241215	13C4-PFOS	----	146 %	65.0-140 %	Recovery greater than upper data quality objective
Samples Submitted							
EP231S: PFAS Surrogate	EP2419087-020	0960_OTH134_241214	13C4-PFOS	----	164 %	65.0-140 %	Recovery greater than upper data quality objective

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Natural							
0960_MW230_241213,	0960_MW105_241213,	----	----	----	06-Jan-2025	20-Dec-2024	17
0960_MW151_241213,	0960_MW103_241213						
Clear Plastic Bottle - Natural							
0960_MW122_241213,	0960_MW139_241213,	----	----	----	24-Dec-2024	20-Dec-2024	4
0960_MW134_241213,	0960_MW227_241213,						
0960_MW228_241213,	0960_MW229_241213						
Clear Plastic Bottle - Natural							
0960_MW175A_241214,	0960_OTH132_241214,	----	----	----	06-Jan-2025	21-Dec-2024	16
0960_OTH134_241214,	0960_OTH129_241214						
Clear Plastic Bottle - Natural							
0960_MW145A_241214		----	----	----	24-Dec-2024	21-Dec-2024	3
Clear Plastic Bottle - Natural							
0960_MW177A_241215,	0960_OTH103_241215,	----	----	----	06-Jan-2025	22-Dec-2024	15
0960_SW001_241215,	0960_SW208_241215,						
0960_SW300_241215,	0960_SW303_241215,						
0960_SW304_241215,	0960_MW177C_241215,						
0960_MW177B_241215,	0960_MW177D_241215						
Clear Plastic Bottle - Natural							
0960_MW176D_241215,	0960_MW176B_241215,	----	----	----	24-Dec-2024	22-Dec-2024	2
0960_MW176C_241215,	0960_MW222_241215,						
0960_MW176A_241215							

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
ED093F: Dissolved Major Cations - Analysis Holding Time Compliance							
Clear Plastic Bottle - Natural 0960_MW178A_241216, 0960_MW179B_241216, 0960_SW209_241216, 0960_SW302_241216, 0960_MW179D_241216, 0960_MW179A_241216, 0960_MW178D_241216, 0960_MW178B_241216, 0960_MW178C_241216, 0960_MW179_241216, 0960_SW211_241216		----	----	----	06-Jan-2025	23-Dec-2024	14
Clear Plastic Bottle - Natural 0960_MW138B_241216, 0960_MW137A_241216, 0960_MW174_241216, 0960_MW137B_241216, 0960_MW137C_241216, 0960_MW137D_241216		----	----	----	24-Dec-2024	23-Dec-2024	1
Clear Plastic Bottle - Natural 0960_MW135A_241217, 0960_MW144A_241217, 0960_MW143A_241217		----	----	----	06-Jan-2025	24-Dec-2024	13

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	0	15	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	44	4.55	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	46	2.17	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	0	15	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	44	2.27	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	46	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0960_SD189_241214, 0960_SD193_241214, 0960_SD291_241214, 0960_SD293_241214, 0960_QC108_241214,	0960_SD192_241214, 0960_SD227_241214, 0960_SD292_241214, 0960_SD210_241214, 0960_SD198_241214	14-Dec-2024	----	----	----	27-Dec-2024	28-Dec-2024	✓
HDPE Soil Jar (EA055) 0960_SD208_241215, 0960_SD303_241215, 0960_QC111_241215, 0960_SD300_241215	0960_SD301_241215, 0960_SD304_241215, 0960_SD211_241216,	15-Dec-2024	----	----	----	27-Dec-2024	29-Dec-2024	✓
HDPE Soil Jar (EA055) 0960_SD209_241216,	0960_SD302_241216	16-Dec-2024	----	----	----	27-Dec-2024	30-Dec-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0960_SD189_241214, 0960_SD193_241214, 0960_SD291_241214, 0960_SD293_241214, 0960_QC108_241214,	0960_SD192_241214, 0960_SD227_241214, 0960_SD292_241214, 0960_SD210_241214, 0960_SD198_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD208_241215, 0960_SD303_241215, 0960_QC111_241215, 0960_SD300_241215	0960_SD301_241215, 0960_SD304_241215, 0960_SD211_241216,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD209_241216,	0960_SD302_241216	16-Dec-2024	02-Jan-2025	14-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0960_SD189_241214, 0960_SD193_241214, 0960_SD291_241214, 0960_SD293_241214, 0960_QC108_241214,	0960_SD192_241214, 0960_SD227_241214, 0960_SD292_241214, 0960_SD210_241214, 0960_SD198_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD208_241215, 0960_SD303_241215, 0960_QC111_241215, 0960_SD300_241215	0960_SD301_241215, 0960_SD304_241215, 0960_SD211_241216,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD209_241216,	0960_SD302_241216	16-Dec-2024	02-Jan-2025	14-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0960_SD189_241214, 0960_SD193_241214, 0960_SD291_241214, 0960_SD293_241214, 0960_QC108_241214,	0960_SD192_241214, 0960_SD227_241214, 0960_SD292_241214, 0960_SD210_241214, 0960_SD198_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD208_241215, 0960_SD303_241215, 0960_QC111_241215, 0960_SD300_241215	0960_SD301_241215, 0960_SD304_241215, 0960_SD211_241216,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD209_241216,	0960_SD302_241216	16-Dec-2024	02-Jan-2025	14-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0960_SD189_241214, 0960_SD193_241214, 0960_SD291_241214, 0960_SD293_241214, 0960_QC108_241214,	0960_SD192_241214, 0960_SD227_241214, 0960_SD292_241214, 0960_SD210_241214, 0960_SD198_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD208_241215, 0960_SD303_241215, 0960_QC111_241215, 0960_SD300_241215	0960_SD301_241215, 0960_SD304_241215, 0960_SD211_241216,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD209_241216,	0960_SD302_241216	16-Dec-2024	02-Jan-2025	14-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0960_SD189_241214, 0960_SD193_241214, 0960_SD291_241214, 0960_SD293_241214, 0960_QC108_241214,	0960_SD192_241214, 0960_SD227_241214, 0960_SD292_241214, 0960_SD210_241214, 0960_SD198_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD208_241215, 0960_SD303_241215, 0960_QC111_241215, 0960_SD300_241215	0960_SD301_241215, 0960_SD304_241215, 0960_SD211_241216,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓
HDPE Soil Jar (EP231X) 0960_SD209_241216,	0960_SD302_241216	16-Dec-2024	02-Jan-2025	14-Jun-2025	✓	03-Jan-2025	11-Feb-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.



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	
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P) 0960_MW230_241213, 0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213	0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213,	13-Dec-2024	----	----	----	24-Dec-2024	27-Dec-2024	✔
Clear Plastic Bottle - Natural (ED037-P) 0960_MW227_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	----	----	----	27-Dec-2024	27-Dec-2024	✔
Clear Plastic Bottle - Natural (ED037-P) 0960_MW145A_241214, 0960_OTH132_241214, 0960_OTH129_241214	0960_MW175A_241214, 0960_OTH134_241214,	14-Dec-2024	----	----	----	24-Dec-2024	28-Dec-2024	✔
Clear Plastic Bottle - Natural (ED037-P) 0960_MW176D_241215, 0960_OTH103_241215, 0960_SW208_241215, 0960_SW303_241215, 0960_MW177C_241215, 0960_MW177D_241215, 0960_MW176C_241215, 0960_MW176A_241215	0960_MW177A_241215, 0960_SW001_241215, 0960_SW300_241215, 0960_SW304_241215, 0960_MW177B_241215, 0960_MW176B_241215, 0960_MW222_241215,	15-Dec-2024	----	----	----	24-Dec-2024	29-Dec-2024	✔
Clear Plastic Bottle - Natural (ED037-P) 0960_MW138B_241216, 0960_MW178A_241216, 0960_SW209_241216, 0960_MW174_241216, 0960_MW137C_241216,	0960_MW137A_241216, 0960_MW179B_241216, 0960_SW302_241216, 0960_MW137B_241216, 0960_MW137D_241216	16-Dec-2024	----	----	----	24-Dec-2024	30-Dec-2024	✔
Clear Plastic Bottle - Natural (ED037-P) 0960_MW179D_241216, 0960_MW178D_241216, 0960_MW178C_241216, 0960_SW211_241216	0960_MW179A_241216, 0960_MW178B_241216, 0960_MW179_241216,	16-Dec-2024	----	----	----	27-Dec-2024	30-Dec-2024	✔
Clear Plastic Bottle - Natural (ED037-P) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	----	----	----	24-Dec-2024	31-Dec-2024	✔



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	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G) 0960_MW230_241213, 0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213	0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213,	13-Dec-2024	----	----	----	03-Jan-2025	10-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_MW227_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	----	----	----	06-Jan-2025	10-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_MW145A_241214, 0960_OTH132_241214,	0960_MW175A_241214, 0960_OTH134_241214	14-Dec-2024	----	----	----	03-Jan-2025	11-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_OTH129_241214		14-Dec-2024	----	----	----	06-Jan-2025	11-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_MW176D_241215,	0960_MW177A_241215	15-Dec-2024	----	----	----	03-Jan-2025	12-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_OTH103_241215, 0960_SW208_241215, 0960_SW303_241215, 0960_MW177C_241215, 0960_MW177D_241215, 0960_MW176C_241215, 0960_MW176A_241215	0960_SW001_241215, 0960_SW300_241215, 0960_SW304_241215, 0960_MW177B_241215, 0960_MW176B_241215, 0960_MW222_241215,	15-Dec-2024	----	----	----	06-Jan-2025	12-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_MW138B_241216, 0960_MW178A_241216,	0960_MW137A_241216, 0960_MW179B_241216	16-Dec-2024	----	----	----	03-Jan-2025	13-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_SW209_241216, 0960_MW174_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_MW178C_241216, 0960_SW211_241216	0960_SW302_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW179_241216,	16-Dec-2024	----	----	----	06-Jan-2025	13-Jan-2025	✓
Clear Plastic Bottle - Natural (ED041G) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	----	----	----	03-Jan-2025	14-Jan-2025	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G) 0960_MW230_241213, 0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213	0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213,	13-Dec-2024	----	----	----	03-Jan-2025	10-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_MW227_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	----	----	----	06-Jan-2025	10-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_MW145A_241214, 0960_OTH132_241214,	0960_MW175A_241214, 0960_OTH134_241214	14-Dec-2024	----	----	----	03-Jan-2025	11-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_OTH129_241214		14-Dec-2024	----	----	----	06-Jan-2025	11-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_MW176D_241215,	0960_MW177A_241215	15-Dec-2024	----	----	----	03-Jan-2025	12-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_OTH103_241215, 0960_SW208_241215, 0960_SW303_241215, 0960_MW177C_241215, 0960_MW177D_241215, 0960_MW176C_241215, 0960_MW176A_241215	0960_SW001_241215, 0960_SW300_241215, 0960_SW304_241215, 0960_MW177B_241215, 0960_MW176B_241215, 0960_MW222_241215,	15-Dec-2024	----	----	----	06-Jan-2025	12-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_MW138B_241216, 0960_MW178A_241216,	0960_MW137A_241216, 0960_MW179B_241216	16-Dec-2024	----	----	----	03-Jan-2025	13-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_SW209_241216, 0960_MW174_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_MW178C_241216, 0960_SW211_241216	0960_SW302_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW179_241216,	16-Dec-2024	----	----	----	06-Jan-2025	13-Jan-2025	✓
Clear Plastic Bottle - Natural (ED045G) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	----	----	----	03-Jan-2025	14-Jan-2025	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural (ED093F) 0960_MW230_241213, 0960_MW151_241213,	0960_MW105_241213, 0960_MW103_241213	13-Dec-2024	----	----	----	06-Jan-2025	20-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW122_241213, 0960_MW134_241213, 0960_MW228_241213,	0960_MW139_241213, 0960_MW227_241213, 0960_MW229_241213	13-Dec-2024	----	----	----	24-Dec-2024	20-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW175A_241214, 0960_OTH134_241214,	0960_OTH132_241214, 0960_OTH129_241214	14-Dec-2024	----	----	----	06-Jan-2025	21-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW145A_241214		14-Dec-2024	----	----	----	24-Dec-2024	21-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW177A_241215, 0960_SW001_241215, 0960_SW300_241215, 0960_SW304_241215, 0960_MW177B_241215,	0960_OTH103_241215, 0960_SW208_241215, 0960_SW303_241215, 0960_MW177C_241215, 0960_MW177D_241215	15-Dec-2024	----	----	----	06-Jan-2025	22-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW176D_241215, 0960_MW176C_241215, 0960_MW176A_241215	0960_MW176B_241215, 0960_MW222_241215,	15-Dec-2024	----	----	----	24-Dec-2024	22-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW178A_241216, 0960_SW209_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_MW178C_241216, 0960_SW211_241216	0960_MW179B_241216, 0960_SW302_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW179_241216,	16-Dec-2024	----	----	----	06-Jan-2025	23-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW138B_241216, 0960_MW174_241216, 0960_MW137C_241216,	0960_MW137A_241216, 0960_MW137B_241216, 0960_MW137D_241216	16-Dec-2024	----	----	----	24-Dec-2024	23-Dec-2024	✖
Clear Plastic Bottle - Natural (ED093F) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	----	----	----	06-Jan-2025	24-Dec-2024	✖



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213, 0960_QC405_241213,	0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213, 0960_MW227_241213	13-Dec-2024	02-Jan-2025	11-Jun-2025	✔	02-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW230_241213, 0960_QC106_241213,	0960_QC503_241213, 0960_QC305_241213	13-Dec-2024	06-Jan-2025	11-Jun-2025	✔	06-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC107_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	07-Jan-2025	11-Jun-2025	✔	07-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW145A_241214, 0960_QC406_241214,	0960_MW175A_241214, 0960_QC306_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✔	02-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH132_241214,	0960_OTH129_241214	14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	03-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_241214		14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	06-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_241215, 0960_QC112_241215	0960_SW304_241215,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✔	02-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW176D_241215, 0960_MW177C_241215, 0960_MW177D_241215	0960_MW177A_241215, 0960_MW177B_241215,	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	03-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH103_241215, 0960_SW208_241215, 0960_QC110_241215, 0960_MW176C_241215,	0960_SW001_241215, 0960_QC109_241215, 0960_MW176B_241215, 0960_MW176A_241215	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW300_241215, 0960_QC307_241215,	0960_QC407_241215, 0960_MW222_241215	15-Dec-2024	06-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW138B_241216, 0960_QC505_241216, 0960_QC506_241216	0960_SW302_241216, 0960_QC504_241216,	16-Dec-2024	02-Jan-2025	14-Jun-2025	✔	02-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_241216		16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	03-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0960_MW137A_241216, 0960_SW209_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_QC114_241216, 0960_MW179_241216,	0960_MW178A_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW178C_241216, 0960_SW211_241216	16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW174_241216, 0960_QC408_241216	0960_QC308_241216,	16-Dec-2024	06-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC113_241216		16-Dec-2024	07-Jan-2025	14-Jun-2025	✔	07-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	02-Jan-2025	15-Jun-2025	✔	02-Jan-2025	15-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC309_241217,	0960_QC409-241217	17-Dec-2024	06-Jan-2025	15-Jun-2025	✔	06-Jan-2025	15-Jun-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213, 0960_QC405_241213,	0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213, 0960_MW227_241213	13-Dec-2024	02-Jan-2025	11-Jun-2025	✔	02-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW230_241213, 0960_QC106_241213,	0960_QC503_241213, 0960_QC305_241213	13-Dec-2024	06-Jan-2025	11-Jun-2025	✔	06-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC107_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	07-Jan-2025	11-Jun-2025	✔	07-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW145A_241214, 0960_QC406_241214,	0960_MW175A_241214, 0960_QC306_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✔	02-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH132_241214,	0960_OTH129_241214	14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	03-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_241214		14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	06-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_241215, 0960_QC112_241215	0960_SW304_241215,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✔	02-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW176D_241215, 0960_MW177C_241215, 0960_MW177D_241215	0960_MW177A_241215, 0960_MW177B_241215,	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	03-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH103_241215, 0960_SW208_241215, 0960_QC110_241215, 0960_MW176C_241215,	0960_SW001_241215, 0960_QC109_241215, 0960_MW176B_241215, 0960_MW176A_241215	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW300_241215, 0960_QC307_241215,	0960_QC407_241215, 0960_MW222_241215	15-Dec-2024	06-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW138B_241216, 0960_QC505_241216, 0960_QC506_241216	0960_SW302_241216, 0960_QC504_241216,	16-Dec-2024	02-Jan-2025	14-Jun-2025	✔	02-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_241216		16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	03-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
0960_MW137A_241216, 0960_SW209_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_QC114_241216, 0960_MW179_241216,	0960_MW178A_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW178C_241216, 0960_SW211_241216	16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW174_241216, 0960_QC408_241216	0960_QC308_241216,	16-Dec-2024	06-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC113_241216		16-Dec-2024	07-Jan-2025	14-Jun-2025	✔	07-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	02-Jan-2025	15-Jun-2025	✔	02-Jan-2025	15-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC309_241217,	0960_QC409-241217	17-Dec-2024	06-Jan-2025	15-Jun-2025	✔	06-Jan-2025	15-Jun-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213, 0960_QC405_241213,	0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213, 0960_MW227_241213	13-Dec-2024	02-Jan-2025	11-Jun-2025	✔	02-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW230_241213, 0960_QC106_241213,	0960_QC503_241213, 0960_QC305_241213	13-Dec-2024	06-Jan-2025	11-Jun-2025	✔	06-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC107_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	07-Jan-2025	11-Jun-2025	✔	07-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW145A_241214, 0960_QC406_241214,	0960_MW175A_241214, 0960_QC306_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✔	02-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH132_241214,	0960_OTH129_241214	14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	03-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_241214		14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	06-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_241215, 0960_QC112_241215	0960_SW304_241215,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✔	02-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW176D_241215, 0960_MW177C_241215, 0960_MW177D_241215	0960_MW177A_241215, 0960_MW177B_241215,	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	03-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH103_241215, 0960_SW208_241215, 0960_QC110_241215, 0960_MW176C_241215,	0960_SW001_241215, 0960_QC109_241215, 0960_MW176B_241215, 0960_MW176A_241215	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW300_241215, 0960_QC307_241215,	0960_QC407_241215, 0960_MW222_241215	15-Dec-2024	06-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW138B_241216, 0960_QC505_241216, 0960_QC506_241216	0960_SW302_241216, 0960_QC504_241216,	16-Dec-2024	02-Jan-2025	14-Jun-2025	✔	02-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_241216		16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	03-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: **WATER** Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides - Continued								
0960_MW137A_241216, 0960_SW209_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_QC114_241216, 0960_MW179_241216,	0960_MW178A_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW178C_241216, 0960_SW211_241216	16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW174_241216, 0960_QC408_241216	0960_QC308_241216,	16-Dec-2024	06-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC113_241216		16-Dec-2024	07-Jan-2025	14-Jun-2025	✔	07-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	02-Jan-2025	15-Jun-2025	✔	02-Jan-2025	15-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC309_241217,	0960_QC409-241217	17-Dec-2024	06-Jan-2025	15-Jun-2025	✔	06-Jan-2025	15-Jun-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213, 0960_QC405_241213,	0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213, 0960_MW227_241213	13-Dec-2024	02-Jan-2025	11-Jun-2025	✔	02-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW230_241213, 0960_QC106_241213,	0960_QC503_241213, 0960_QC305_241213	13-Dec-2024	06-Jan-2025	11-Jun-2025	✔	06-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC107_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	07-Jan-2025	11-Jun-2025	✔	07-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW145A_241214, 0960_QC406_241214,	0960_MW175A_241214, 0960_QC306_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✔	02-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH132_241214,	0960_OTH129_241214	14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	03-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_241214		14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	06-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_241215, 0960_QC112_241215	0960_SW304_241215,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✔	02-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW176D_241215, 0960_MW177C_241215, 0960_MW177D_241215	0960_MW177A_241215, 0960_MW177B_241215,	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	03-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH103_241215, 0960_SW208_241215, 0960_QC110_241215, 0960_MW176C_241215,	0960_SW001_241215, 0960_QC109_241215, 0960_MW176B_241215, 0960_MW176A_241215	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW300_241215, 0960_QC307_241215,	0960_QC407_241215, 0960_MW222_241215	15-Dec-2024	06-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW138B_241216, 0960_QC505_241216, 0960_QC506_241216	0960_SW302_241216, 0960_QC504_241216,	16-Dec-2024	02-Jan-2025	14-Jun-2025	✔	02-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_241216		16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	03-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: **WATER** Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
0960_MW137A_241216, 0960_SW209_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_QC114_241216, 0960_MW179_241216,	0960_MW178A_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW178C_241216, 0960_SW211_241216	16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW174_241216, 0960_QC408_241216	0960_QC308_241216,	16-Dec-2024	06-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC113_241216		16-Dec-2024	07-Jan-2025	14-Jun-2025	✔	07-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	02-Jan-2025	15-Jun-2025	✔	02-Jan-2025	15-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC309_241217,	0960_QC409-241217	17-Dec-2024	06-Jan-2025	15-Jun-2025	✔	06-Jan-2025	15-Jun-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0960_MW105_241213, 0960_MW122_241213, 0960_MW103_241213, 0960_QC405_241213,	0960_MW151_241213, 0960_MW139_241213, 0960_MW134_241213, 0960_MW227_241213	13-Dec-2024	02-Jan-2025	11-Jun-2025	✔	02-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW230_241213, 0960_QC106_241213,	0960_QC503_241213, 0960_QC305_241213	13-Dec-2024	06-Jan-2025	11-Jun-2025	✔	06-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC107_241213, 0960_MW229_241213	0960_MW228_241213,	13-Dec-2024	07-Jan-2025	11-Jun-2025	✔	07-Jan-2025	11-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW145A_241214, 0960_QC406_241214,	0960_MW175A_241214, 0960_QC306_241214	14-Dec-2024	02-Jan-2025	12-Jun-2025	✔	02-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH132_241214,	0960_OTH129_241214	14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	03-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_241214		14-Dec-2024	03-Jan-2025	12-Jun-2025	✔	06-Jan-2025	12-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_241215, 0960_QC112_241215	0960_SW304_241215,	15-Dec-2024	02-Jan-2025	13-Jun-2025	✔	02-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW176D_241215, 0960_MW177C_241215, 0960_MW177D_241215	0960_MW177A_241215, 0960_MW177B_241215,	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	03-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH103_241215, 0960_SW208_241215, 0960_QC110_241215, 0960_MW176C_241215,	0960_SW001_241215, 0960_QC109_241215, 0960_MW176B_241215, 0960_MW176A_241215	15-Dec-2024	03-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW300_241215, 0960_QC307_241215,	0960_QC407_241215, 0960_MW222_241215	15-Dec-2024	06-Jan-2025	13-Jun-2025	✔	06-Jan-2025	13-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW138B_241216, 0960_QC505_241216, 0960_QC506_241216	0960_SW302_241216, 0960_QC504_241216,	16-Dec-2024	02-Jan-2025	14-Jun-2025	✔	02-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_241216		16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	03-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums - Continued								
0960_MW137A_241216, 0960_SW209_241216, 0960_MW137C_241216, 0960_MW179D_241216, 0960_MW178D_241216, 0960_QC114_241216, 0960_MW179_241216,	0960_MW178A_241216, 0960_MW137B_241216, 0960_MW137D_241216, 0960_MW179A_241216, 0960_MW178B_241216, 0960_MW178C_241216, 0960_SW211_241216	16-Dec-2024	03-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW174_241216, 0960_QC408_241216	0960_QC308_241216,	16-Dec-2024	06-Jan-2025	14-Jun-2025	✔	06-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC113_241216		16-Dec-2024	07-Jan-2025	14-Jun-2025	✔	07-Jan-2025	14-Jun-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW135A_241217, 0960_MW143A_241217	0960_MW144A_241217,	17-Dec-2024	02-Jan-2025	15-Jun-2025	✔	02-Jan-2025	15-Jun-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC309_241217,	0960_QC409-241217	17-Dec-2024	06-Jan-2025	15-Jun-2025	✔	06-Jan-2025	15-Jun-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	10	91	10.99	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	0	15	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	44	4.55	10.00	✗	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	46	2.17	10.00	✗	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	6	91	6.59	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	15	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	44	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	4	46	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Alkalinity by Auto Titrator	ED037-P	3	60	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	3	60	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	6	91	6.59	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	15	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	44	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	4	46	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	3	60	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Page : 22 of 24
 Work Order : EP2419087 Amendment 1
 Client : GHD PTY LTD
 Project : 12641234 - PFAS OMP



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	
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	3	60	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	0	15	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	44	2.27	5.00	✗	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	46	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	3	60	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by 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.
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
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.



Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by 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 concentrated, combined with an equal volume of 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-SUT	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 concentrated, combined with an equal volume of 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.
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.



QUALITY CONTROL REPORT

Work Order : EP2419087

Page : 1 of 35

Amendment : 1

Client : GHD PTY LTD

Contact : [REDACTED]

Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000

Telephone : ---

Project : 12641234 - PFAS OMP

Order number : 12641234

C-O-C number : 77142

Sampler : [REDACTED]

Site : 0960_offsite

Quote number : EP24GHDSE0016_V5

No. of samples received : 90

No. of samples analysed : 90

Laboratory : Environmental Division Perth

Contact : [REDACTED]

Address : 26 Rigali Way Wangara WA Australia 6065

Telephone : +61-8-9406 1301

Date Samples Received : 19-Dec-2024

Date Analysis Commenced : 23-Dec-2024

Issue Date : 28-Feb-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
[REDACTED]	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
[REDACTED]	Organic Supervisor	Perth Organics, Wangara, WA
Niamh Carthew	Inorganic Chemist	Perth Inorganics, Wangara, WA



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**

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: 6285713)									
EP2419087-030	0960_SD189_241214	EA055: Moisture Content	----	0.1	%	1.6	1.9	13.5	0% - 50%
EP2419087-040	0960_SD301_241215	EA055: Moisture Content	----	0.1	%	28.2	28.4	0.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6291292)									
EP2418942-064	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2419087-039	0960_SD210_241214	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	0.0029	0.0022	25.4	0% - 50%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6291299)									
EP2419087-058	0960_QC111_241215	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



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: 6291299) - continued									
EP2419087-058	0960_QC111_241215	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2419242-002	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	0.0003	0.0004	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6291292)									
EP2418942-064	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 (PFTriDA)	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
EP2419087-039	0960_SD210_241214	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 (PFTriDA)	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: 6291299)							
EP2419087-058	0960_QC111_241215	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	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: 6291299) - continued									
EP2419087-058	0960_QC111_241215	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
EP2419242-002	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		
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6291292)									
EP2418942 064	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
EP2419087-039	0960_SD210_241214	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: 6291292) - continued									
EP2419087-039	0960_SD210_241214	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: 6291299)									
EP2419087-058	0960_QC111_241215	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
EP2419242-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6291292)									
EP2418942-064	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



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: 6291292) - continued									
EP2418942-064	Anonymous	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
EP2419087-039	0960_SD210_241214	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: 6291299)									
EP2419087-058	0960_QC111_241215	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
EP2419242-002	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
EP231P: PFAS Sums (QC Lot: 6291292)									
EP2418942-064	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2419087-039	0960_SD210_241214	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0032	0.0025	24.6	0% - 50%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0032	0.0025	24.6	0% - 50%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0032	0.0025	24.6	0% - 50%



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 (%)
EP231P: PFAS Sums (QC Lot: 6291299)									
EP2419087-058	0960_QC111_241215	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
EP2419242-002	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0003	0.0004	28.6	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0003	0.0004	28.6	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0003	0.0004	28.6	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 (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6283762)									
EP2419087-002	0960_MW105_241213	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	434	432	0.4	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	434	432	0.4	0% - 20%
EP2419087-012	0960_MW144A_241217	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	203	203	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	203	203	0.0	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 6283766)									
EP2419087-022	0960_OTH103_241215	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	170	170	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	170	170	0.0	0% - 20%
EP2419087 056	0960 MW177D 241215	ED037-P: Hydroxide Alkalinity as CaCO3	DMO 210 001	1	mg/L	1	1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	176	174	1.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	176	174	1.0	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 6286826)									
EP2419087-075	0960_MW179A_241216	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	191	190	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	191	190	0.0	0% - 20%
EP2419102-029	Anonymous	ED037 P Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	126	127	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	126	127	0.0	0% - 20%



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6281421)									
EP2419087-001	0960_MW230_241213	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	11	11	0.0	0% - 50%
EP2419087-011	0960_MW175A_241214	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	255	244	4.3	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6281423)									
EP2419087-021	0960_OTH129_241214	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	2540	2390	6.2	0% - 20%
EP2419087-055	0960_MW177B_241215	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	4930	4710	4.7	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6281503)									
EP2418942-070	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	<1	0.0	No Limit
EP2419087-085	0960_MW227_241213	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	16	16	0.0	0% - 50%
ED045G: Chloride by Discrete Analyser (QC Lot: 6281422)									
EP2419087-001	0960_MW230_241213	ED045G: Chloride	16887-00-6	1	mg/L	123	122	0.0	0% - 20%
EP2419087-011	0960_MW175A_241214	ED045G: Chloride	16887-00-6	1	mg/L	2370	2340	1.2	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6281424)									
EP2419087-021	0960_OTH129_241214	ED045G: Chloride	16887-00-6	1	mg/L	20400	20400	0.0	0% - 20%
EP2419087-055	0960_MW177B_241215	ED045G: Chloride	16887-00-6	1	mg/L	40800	40600	0.5	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6281504)									
EP2418942-070	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	<1	<1	0.0	No Limit
EP2419087-085	0960_MW227_241213	ED045G: Chloride	16887-00-6	1	mg/L	122	121	0.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6280784)									
EP2418951-010	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	66	77	14.7	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	444	454	2.4	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	5290	5400	2.2	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	214	219	2.4	0% - 20%
EP2418951-064	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	462	453	2.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	1530	1510	1.2	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	11800	11700	0.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	530	528	0.5	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6280785)									
EP2419087-022	0960_OTH103_241215	ED093F: Calcium	7440-70-2	1	mg/L	433	429	1.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	1480	1480	0.4	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	11500	11400	0.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	510	512	0.4	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6280789)									
EP2418951-008	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	34	34	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	59	59	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	1480	1480	0.2	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	73	73	0.0	0% - 20%

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED093F: Dissolved Major Cations (QC Lot: 6280789) - continued									
EP2419087-015	0960_MW176D_241215	ED093F: Calcium	7440-70-2	1	mg/L	940	964	2.5	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	2990	3080	2.8	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	22700	23300	2.8	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	1100	1120	1.8	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6280790)									
EP2419087-086	0960_MW228_241213	ED093F: Calcium	7440-70-2	1	mg/L	137	137	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	12	12	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	62	62	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	3	3	0.0	No Limit
ED093F: Dissolved Major Cations (QC Lot: 6280798)									
EP2419087-017	0960_MW178A_241216	ED093F: Calcium	7440-70-2	1	mg/L	1070	1090	1.5	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	2500	2540	1.9	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	18500	18900	2.1	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	980	998	1.8	0% - 20%
EP2419087-088	0960_SW211_241216	ED093F: Calcium	7440-70-2	1	mg/L	762	775	1.6	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	2400	2440	1.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	17600	17800	1.2	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	939	957	1.9	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6280804)									
EP2419087-010	0960_MW135A_241217	ED093F: Calcium	7440-70-2	1	mg/L	377	370	1.9	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	837	831	0.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	6470	6450	0.3	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	347	345	0.7	0% - 20%
EP2419102-018	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	420	418	0.4	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	1340	1330	1.1	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	10200	10100	0.9	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	493	488	1.0	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6291718)									
EP2419204-012	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6291732)									



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: 6291732) - continued									
EP2419204-007	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6292774)									
EP2419335-018	Anonymous	EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002 (0.0008)*	µg/L	0.0140	0.0116	18.8	0% - 50%
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0013	0.0012	12.4	No Limit
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6291718)									
EP2419204-012	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6291732)									
EP2419204-007	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: 6291732) - continued									
EP2419204-007	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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6292774)									
EP2419335-018	Anonymous	EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005 (0.0008)*	µg/L	0.0129	0.0129	0.0	0% - 50%
		EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005 (0.0008)*	µg/L	0.0074	0.0081	8.9	0% - 50%
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005 (0.0008)*	µg/L	0.0016	0.0020	22.8	No Limit
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005 (0.0020)*	µg/L	<0.0008	<0.0020	82.9	No Limit
		EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6291718)									
EP2419204-012	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: 6291718) - continued									
EP2419204-012	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6291732)									
EP2419204-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6292774)									
EP2419335-018	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005 (0.0008)*	µg/L	<0.0008	<0.0008	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001 (0.002) *	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001 (0.002) *	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001 (0.002) *	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001 (0.002) *	µg/L	<0.002	<0.002	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6291718)									
EP2419204-012	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



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6291718) - continued									
EP2419204-012	Anonymous	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6291732)									
EP2419204-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6292774)									
EP2419335-018	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	0.053	0.064	20.0	0% - 20%
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6291718)									
EP2419204-012	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
EP231P: PFAS Sums (QC Lot: 6291732)									
EP2419204-007	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
EP231P: PFAS Sums (QC Lot: 6292774)									
EP2419335-018	Anonymous	EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002 (0.0005)*	µg/L	0.0153	0.0128	17.8	0% - 20%
		EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002 (0.0005)*	µg/L	0.0902	0.0998	10.1	0% - 20%
		EP231X-SUT: Sum of PFAS	----	0.0002 (0.0005)*	µg/L	0.0902	0.0998	10.1	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291292)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	100	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	106	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	105	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	108	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	102	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291299)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	105	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.8	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	102	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	100	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	104	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	104	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291292)								
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	102	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	112	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	135
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291299)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	91.1	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	132



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291299) - 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	98.8	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	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	98.8	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.2	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	108	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291292)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	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	108	61.9	139
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	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: 6291299)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	112	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	129	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	92.6	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	133	61.9	139
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291292)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	103	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	114	64.0	140

ED037P: Alkalinity by PC Titrator (QCLot: 6286826)

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
ED037P: Alkalinity by PC Titrator (QCLot: 6286826) - continued								
ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-00 1	1	mg/L	<1	----	----	----	----
ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----
ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	20 mg/L 200 mg/L	101 104	85.1 90.5	126 111
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6281421)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L 500 mg/L	98.1 97.3	89.9 89.9	112 112
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6281423)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L 500 mg/L	96.8 93.1	89.9 89.9	112 112
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6281503)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L 500 mg/L	99.4 96.2	89.9 89.9	112 112
ED045G: Chloride by Discrete Analyser (QCLot: 6281422)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L 1000 mg/L	103 101	88.6 88.6	113 113
ED045G: Chloride by Discrete Analyser (QCLot: 6281424)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L 1000 mg/L	96.8 100	88.6 88.6	113 113
ED045G: Chloride by Discrete Analyser (QCLot: 6281504)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L 1000 mg/L	99.4 101	88.6 88.6	113 113
ED093F: Dissolved Major Cations (QCLot: 6280784)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	96.6	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	103	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	95.1	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	93.3	84.6	108
ED093F: Dissolved Major Cations (QCLot: 6280785)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	99.5	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	105	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	97.4	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	95.0	84.6	108
ED093F: Dissolved Major Cations (QCLot: 6280789)								



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED093F: Dissolved Major Cations (QCLot: 6280789) - continued								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	107	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	105	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	103	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	101	84.6	108
ED093F: Dissolved Major Cations (QCLot: 6280790)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	106	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	104	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	103	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	100	84.6	108
ED093F: Dissolved Major Cations (QCLot: 6280798)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	106	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	103	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	102	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	101	84.6	108
ED093F: Dissolved Major Cations (QCLot: 6280804)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	104	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	105	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	102	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	99.7	84.6	108
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291718)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	108	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	120	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	113	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	110	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	113	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	104	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291724)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	115	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	104	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	111	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	117	69.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291724) - continued								
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	112	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	112	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	115	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291732)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	107	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	103	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	99.0	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	106	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	97.3	70.0	135
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: 6292774)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	103	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	94.9	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	89.8	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	89.0	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	91.5	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	96.6	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	92.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6292779)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	101	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	101	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	97.9	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	93.6	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	101	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	99.2	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	100	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6292804)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	103	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	111	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	121	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	101	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	120	69.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6292804) - continued								
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	108	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	95.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6294773)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	104	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	95.0	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	95.3	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	98.3	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	91.6	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	99.1	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	90.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6294779)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	96.2	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	89.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	88.5	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	88.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	87.8	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	87.1	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	85.1	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6297334)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	104	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	103	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	98.3	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	93.7	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	102	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	95.2	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	100	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6297335)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	88.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	83.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	92.8	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	84.9	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	92.7	70.0	135

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound		CAS Number	LOR		Unit	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6297335) - continued									
EP231X: Perfluorodecane sulfonic acid (PFDS)		335-77-3	0.02	µg/L	<0.02	0.241 µg/L	89.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6297336)									
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)		423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	98.5	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)		375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	99.0	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)		2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	92.8	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)		355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	87.8	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)		375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	94.5	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)		1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	93.2	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)		335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	94.8	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291718)									
EP231X: Perfluorobutanoic acid (PFBA)		375-22-4	0.1	µg/L	<0.1	1.25 µg/L	126	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)		2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	94.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)		307-24-4	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)		375-85-9	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)		335-67-1	0.01	µg/L	<0.01	0.25 µg/L	120	71.0	133
EP231X: Perfluorononanoic acid (PFNA)		375-95-1	0.02	µg/L	<0.02	0.25 µg/L	125	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)		335-76-2	0.02	µg/L	<0.02	0.25 µg/L	96.6	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	100	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)		72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	92.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)		376-06-7	0.05	µg/L	<0.05	0.25 µg/L	82.4	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291724)									
EP231X: Perfluorobutanoic acid (PFBA)		375-22-4	0.1	µg/L	<0.1	1.25 µg/L	104	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)		2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	115	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)		307-24-4	0.02	µg/L	<0.02	0.25 µg/L	107	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	110	71.0	133
EP231X: Perfluorononanoic acid (PFNA)		375-95-1	0.02	µg/L	<0.02	0.25 µg/L	125	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	130	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)		307-55-1	0.02	µg/L	<0.02	0.25 µg/L	119	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)		72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	116	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)		376-06-7	0.05	µg/L	<0.05	0.25 µg/L	118	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291732)									



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291732) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	99.6	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	95.8	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	94.0	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	99.2	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	114	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	107	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	105	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	107	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6292774)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	89.3	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	84.0	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	84.8	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	86.0	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	90.8	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	94.4	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	88.8	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	96.4	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	98.8	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	104	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	89.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6292779)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	96.8	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	99.2	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	97.2	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	93.6	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	96.4	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	98.0	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	104	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	113	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	92.8	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	102	65.0	144



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6292779) - continued								
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	105	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6292804)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	126	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	98.4	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	114	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	114	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	108	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	117	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	104	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	101	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	101	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	113	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	90.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6294773)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	98.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	99.6	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	92.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	91.6	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	96.0	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	99.2	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	98.0	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	110	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	94.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	98.0	38.8	149
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6294779)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	84.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	91.2	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	87.6	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	87.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	91.2	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	92.4	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	97.2	71.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6294779) - continued								
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.0	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	87.6	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	94.8	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	95.6	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	90.4	38.8	149
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6297334)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	97.4	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	105	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	97.6	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	93.2	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	96.8	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	93.6	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	90.8	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	109	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	97.2	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	89.2	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	103	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	98.4	38.8	149
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6297335)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	89.0	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	91.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	86.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	88.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	93.6	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	80.8	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	107	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	91.2	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	96.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	93.4	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6297336)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	94.4	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	90.8	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	93.2	72.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)
				Concentration		LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6297336) - continued								
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	95.2	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	84.0	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	94.4	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	91.2	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	96.8	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	114	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	90.4	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	85.6	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291718)								
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	105	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	98.6	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	112	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	122	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	125	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	# 141	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291724)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	115	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	138	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	114	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	119	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	122	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	114	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	106	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291732)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	112	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	108	60.5	138



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
CAS Number	LOR	Unit					Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291732) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	110	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	111	62.2	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: 6292774)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	69.2	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	# 49.4	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	# 51.8	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	68.8	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	73.9	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	91.2	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	99.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6292779)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	115	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	101	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	83.0	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	98.2	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	90.1	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	95.2	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	101	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6292804)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	95.2	67.0	137

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6292804) - continued								
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	92.5	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	81.9	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	108	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	118	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	108	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	108	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6294773)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	107	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	110	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	88.2	57.9	141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	107	63.3	134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	124	60.0	136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	104	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	89.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6294779)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	97.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	90.2	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	79.0	57.9	141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	97.6	63.3	134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	103	60.0	136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	98.8	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	89.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6297334)								

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound		CAS Number	LOR		Unit	Result	Spike Concentration	Spike Recovery (%) LCS
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6297334) - continued								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)		754-91-6	0.002	µg/L	<0.002	0.025 µg/L	106	67.0 137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)		31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	93.1	68.0 141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)		4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	89.8	57.9 141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)		24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	102	63.3 134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	102	60.0 136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)		2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	96.4	65.0 136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)		2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	96.4	61.0 135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6297335)								
EP231X: Perfluorooctane sulfonamide (FOSA)		754-91-6	0.02	µg/L	<0.02	0.25 µg/L	95.6	67.0 137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)		31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	72.3	68.0 141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)		4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	71.1	60.5 138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)		24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	95.6	68.3 134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	103	62.2 138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)		2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	90.8	65.0 136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)		2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	97.0	61.0 135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6297336)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)		754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	114	67.0 137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)		31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	111	68.0 141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)		4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	93.4	57.9 141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)		24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	99.7	63.3 134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	91.7	60.0 136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)		2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	86.0	65.0 136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)		2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	98.0	61.0 135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291718)								



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291718) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	121	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 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	137	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	109	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291724)								
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	122	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	123	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	# 148	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291732)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	113	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	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	94.6	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6292774)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	100	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	105	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	99.6	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	68.4	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6292779)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	104	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	101	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	97.9	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	95.3	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6292804)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	126	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	126	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	# 146	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	# 195	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6294773)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	100	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	104	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	102	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	83.9	53.1	133

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6294779)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	92.3	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	93.3	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	87.1	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	117	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6297334)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	110	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	102	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	90.4	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	115	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6297335)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	97.7	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	89.2	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	97.1	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	125	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6297336)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	104	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	96.8	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	90.0	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	112	53.1	133
EP231P: PFAS Sums (QCLot: 6291718)								
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: 6291724)								
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: 6291732)								
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: 6294773)								



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)
				Concentration		LCS	Low	High
EP231P: PFAS Sums (QCLot: 6294773) - continued								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6294779)								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6297334)								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6297335)								
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**

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: 6291292)							
EP2419087-030	0960_SD189_241214	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	122	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	120	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	116	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	109	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	106	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	99.9	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291299)							
EP2419087-089	0960_SD211_241216	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	102	72.0	128



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291299) - continued							
EP2419087-089	0960_SD211_241216	EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	101	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	104	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	96.6	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	92.9	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	104	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291292)							
EP2419087-030	0960_SD189_241214	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	120	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	107	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	112	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	124	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	125	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	108	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	127	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	# 146	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	110	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	100	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	91.1	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291299)							
EP2419087-089	0960_SD211_241216	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	96.0	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	92.7	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	99.3	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	99.2	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	106	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	94.6	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	102	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	120	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	97.7	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291292)							
EP2419087-030	0960_SD189_241214	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	111	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	114	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	100.0	60.0	130



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291292) - continued							
EP2419087-030	0960_SD189_241214	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	119	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	113	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	124	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291299)							
EP2419087-089	0960_SD211_241216	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	111	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	124	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	98.3	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	106	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	111	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	85.9	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291292)							
EP2419087-030	0960_SD189_241214	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	113	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	123	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	# 138	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	# 135	60.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291299)							
EP2419087-089	0960_SD211_241216	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	105	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	102	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	106	60.0	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
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6281421)							
EP2419087-001	0960_MW230_241213	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	121	70.4	130
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6281423)							
EP2419087-021	0960_OTH129_241214	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	# Not Determined	70.4	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6281503)							
EP2418942-070	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	118	70.4	130
ED045G: Chloride by Discrete Analyser (QCLot: 6281422)							
EP2419087-001	0960_MW230_241213	ED045G: Chloride	16887-00-6	200 mg/L	129	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6281424)							
EP2419087-021	0960_OTH129_241214	ED045G: Chloride	16887-00-6	200 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6281504)							
EP2418942-070	Anonymous	ED045G: Chloride	16887-00-6	200 mg/L	126	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6291732)							
EP2419204-011	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	106	72.0	129
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.232 µg/L	104	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	105	68.0	129
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	104	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	107	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.24 µg/L	110	70.0	135
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	111	53.0	129
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6291732)							
EP2419204-011	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	101	73.0	142
		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	115	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	107	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	103	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	104	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	96.7	71.0	134
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	116	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	106	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.25 µg/L	105	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291732)							
EP2419204-011	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	106	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	106	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	103	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	115	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	112	70.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6291732) - continued							
EP2419204-011	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	105	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	101	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6291732)							
EP2419204-011	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	124	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	111	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	111	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	100	70.0	130



CHAIN OF CUSTODY

COC#: 77207

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_241218

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Groundwater - SUT PFAS WATER	Soil & Sediment - PFAS SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0960_MW147A_241217		17/12/2024 12:52 PM	WATER	ALS: 3 Non ALS: 0	No	X	X				
002	0960_MW141B_241217		17/12/2024 02:04 PM	WATER	ALS: 3 Non ALS: 0	No	X		X			
003	0960_MW141C_241217		17/12/2024 02:26 PM	WATER	ALS: 3 Non ALS: 0	No	X		X			
004	0960_MW141D_241217		17/12/2024 03:33 PM	WATER	ALS: 3 Non ALS: 0	No	X		X			
005	0960_SD298_241217		17/12/2024 11:29 AM	SOIL	ALS: 1 Non ALS: 0	No				X		Includes major ions bottle - unable to be scanned

Environmental Division
Perth

Work Order Reference

EP2500078



Monday, January 6, 2025

4:40:00 AM

Telephone : --61-8-9106 1301



CHAIN OF CUSTODY

COC#: 77207

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960_241218

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0960_MW147A_241217	Clear Plastic Bottle - Natural	125 mL	00070523130650	Green	No	
001	0960_MW147A_241217	HDPE (no PTFE)	20 mL	00352312076146	Grey	No	
001	0960_MW147A_241217	HDPE (no PTFE)	20 mL	00352312076423	Grey	No	
002	0960_MW141B_241217	HDPE (no PTFE)	125 mL	00351223004969	Grey	No	
002	0960_MW141B_241217	HDPE (no PTFE)	125 mL	00351223004955	Grey	No	
002	0960_MW141B_241217	Clear Plastic Bottle - Natural	125 mL	00071122020055	Green	No	
003	0960_MW141C_241217	HDPE (no PTFE)	125 mL	00351223004773	Grey	No	
003	0960_MW141C_241217	HDPE (no PTFE)	125 mL	00351223004823	Grey	No	
003	0960_MW141C_241217	Clear Plastic Bottle - Natural	125 mL	00071122020001	Green	No	
004	0960_MW141D_241217	Clear Plastic Bottle - Natural	125 mL	00070523130717	Green	No	
004	0960_MW141D_241217	HDPE (no PTFE)	125 mL	00351223004868	Grey	No	
004	0960_MW141D_241217	HDPE (no PTFE)	125 mL	00351223004896	Grey	No	
005	0960_SD298_241217	HDPE Soil Jar	200 mL	00620724014511	Grey	No	

Total Bottle Count: ALS: 13, Non ALS: 0



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EP2500078

Client : GHD PTY LTD
Contact :
Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000

E-mail :
Telephone : ----
Facsimile : ----

Project : 12641234 - PFAS OMP
Order number : 12641234

C-O-C number : 77207
Site : 0960_241218
Sampler :

Laboratory : Environmental Division Perth
Contact :
Address : 26 Rigali Way Wangara WA Australia
6065

E-mail :
alsglobal.com
Telephone : +61-8-9406 1301
Facsimile : +61-8-9406 1399

Page : 1 of 3
Quote number : EP2024GHDSE0016_V5
(EP24GHDSE0016_V5)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 06-Jan-2025 12:45
Client Requested Due : 14-Jan-2025
Date

Issue Date : 07-Jan-2025
Scheduled Reporting Date : 14-Jan-2025

Delivery Details

Mode of Delivery : Carrier
No. of coolers/boxes : 3
Receipt Detail :

Security Seal : Intact.
Temperature : 7.3 - Ice present
No. of samples received / analysed : 5 / 5

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Please see scanned COC for sample discrepancies: extra samples , samples not received etc.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (Samples.Perth@alsglobal.com)
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Perth, NATA accreditation no. 825, site no. 15847.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **pH analysis should be conducted within 6 hours of sampling.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X-EP (solids) PFAS - Full Suite (30 analytes)
EP2500078-005	17-Dec-2024 11:29	0960_SD298_241217	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30)	WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity
EP2500078-001	17-Dec-2024 12:52	0960_MW147A_241217	✓		✓
EP2500078-002	17-Dec-2024 14:04	0960_MW141B_241217		✓	✓
EP2500078-003	17-Dec-2024 14:26	0960_MW141C_241217		✓	✓
EP2500078-004	17-Dec-2024 15:33	0960_MW141D_241217		✓	✓

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	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)				Date	Evaluation	Date	Evaluation
EA055: Moisture Content							
0960_SD298_241217	HDPE Soil Jar	----	31-Dec-2024	06-Jan-2025	✗	----	----

Matrix: **WATER**

Evaluation ✗ Holding time breach ; ✓ Within holding time

Method	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)				Date	Evaluation	Date	Evaluation
ED037-P: Alkalinity by Auto Titrator							
0960_MW141B_2412	Clear Plastic Bottle - Natural	----	31-Dec-2024	06-Jan-2025	✗	----	----
0960_MW141C_2412	Clear Plastic Bottle - Natural	----	31-Dec-2024	06-Jan-2025	✗	----	----
0960_MW141D_2412	Clear Plastic Bottle - Natural	----	31-Dec-2024	06-Jan-2025	✗	----	----
0960_MW147A_2412	Clear Plastic Bottle - Natural	----	31-Dec-2024	06-Jan-2025	✗	----	----



ED093F: Major Cations - Dissolved							
0960_MW141B_2412	Clear Plastic Bottle - Natural	----	24-Dec-2024	06-Jan-2025	✗	----	----
0960_MW141C_2412	Clear Plastic Bottle - Natural	----	24-Dec-2024	06-Jan-2025	✗	----	----
0960_MW141D_2412	Clear Plastic Bottle - Natural	----	24-Dec-2024	06-Jan-2025	✗	----	----
0960_MW147A_2412	Clear Plastic Bottle - Natural	----	24-Dec-2024	06-Jan-2025	✗	----	----

Requested Deliverables

Accounts Payable Australia

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

DERP LAB REPORTS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]



CERTIFICATE OF ANALYSIS

Work Order	: EP2500078	Page	: 1 of 10
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 999 HAY STREET PERTH WA, AUSTRALIA 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: 12641234 - PFAS OMP	Date Samples Received	: 06-Jan-2025 12:45
Order number	: 12641234	Date Analysis Commenced	: 07-Jan-2025
C-O-C number	: 77207	Issue Date	: 15-Jan-2025 08:08
Sampler	: [REDACTED]		
Site	: 0960_241218		
Quote number	: EP24GHDSE0016_V5		
No. of samples received	: 5		
No. of samples analysed	: 5		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This 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
Chris Lemaitre	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
John Horwood	Organic Supervisor	Perth Organics, Wangara, WA



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.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO₂ and Fluoride to the Anions.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- 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. 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.
- 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.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW147A_24121 7	0960_MW141B_24121 7	0960_MW141C_24121 7	0960_MW141D_24121 7	----
Sampling date / time				17-Dec-2024 12:52	17-Dec-2024 14:04	17-Dec-2024 14:26	17-Dec-2024 15:33	----
Compound	CAS Number	LOR	Unit	EP2500078-001	EP2500078-002	EP2500078-003	EP2500078-004	-----
				Result	Result	Result	Result	---
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	130	306	292	1170	----
Total Alkalinity as CaCO3	----	1	mg/L	130	306	292	1170	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	4750	1920	2040	3010	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	34700	12200	13100	19200	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	989	448	488	686	----
Magnesium	7439-95-4	1	mg/L	2560	957	963	1430	----
Sodium	7440-23-5	1	mg/L	19900	6990	7280	11000	----
Potassium	7440-09-7	1	mg/L	1170	442	464	646	----
EN055: Ionic Balance								
∅ Total Anions	----	0.01	meq/L	1080	390	418	628	----
∅ Total Cations	----	0.01	meq/L	1160	416	432	647	----
∅ Ionic Balance	----	0.01	%	3.36	3.25	1.68	1.51	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	----	<0.0020	<0.0020	<0.0020	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW147A_24121 7	0960_MW141B_24121 7	0960_MW141C_24121 7	0960_MW141D_24121 7	----
Sampling date / time				17-Dec-2024 12:52	17-Dec-2024 14:04	17-Dec-2024 14:26	17-Dec-2024 15:33	----	
Compound	CAS Number	LOR	Unit	EP2500078-001	EP2500078-002	EP2500078-003	EP2500078-004	-----	
				Result	Result	Result	Result	—	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	----	<0.0002	<0.0002	<0.0002	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW147A_24121 7	0960_MW141B_24121 7	0960_MW141C_24121 7	0960_MW141D_24121 7	----
Sampling date / time					17-Dec-2024 12:52	17-Dec-2024 14:04	17-Dec-2024 14:26	17-Dec-2024 15:33	----
Compound	CAS Number	LOR	Unit	EP2500078-001	EP2500078-002	EP2500078-003	EP2500078-004	-----	
				Result	Result	Result	Result	—	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	----	<0.0020	<0.0020	<0.0020	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	----	----	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW147A_24121 7	0960_MW141B_24121 7	0960_MW141C_24121 7	0960_MW141D_24121 7	----
Sampling date / time					17-Dec-2024 12:52	17-Dec-2024 14:04	17-Dec-2024 14:26	17-Dec-2024 15:33	----
Compound	CAS Number	LOR	Unit	EP2500078-001	EP2500078-002	EP2500078-003	EP2500078-004	-----	
				Result	Result	Result	Result	---	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	----	----	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	<0.0005	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	<0.0005	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	----	<0.0005	<0.0005	<0.0005	<0.0005	----
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	----	----	----	----	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	----	<0.001	<0.001	<0.001	<0.001	----



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW147A_24121 7	0960_MW141B_24121 7	0960_MW141C_24121 7	0960_MW141D_24121 7	----
Sampling date / time					17-Dec-2024 12:52	17-Dec-2024 14:04	17-Dec-2024 14:26	17-Dec-2024 15:33	----
Compound	CAS Number	LOR	Unit	EP2500078-001	EP2500078-002	EP2500078-003	EP2500078-004	-----	
				Result	Result	Result	Result	---	
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	----	----	----	----	
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	----	<0.0002	<0.0002	<0.0002	----	
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	----	<0.0002	<0.0002	<0.0002	----	
^ Sum of PFAS	----	0.0002	µg/L	----	<0.0002	<0.0002	<0.0002	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	112	----	----	----	----	
13C8-PFOA	----	0.02	%	105	----	----	----	----	
13C4-PFOS	----	0.0005	%	----	107	120	109	----	
13C8-PFOA	----	0.0005	%	----	106	105	105	----	



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0960_SD298_241217

Sampling date / time

17-Dec-2024 11:29

Compound	CAS Number	LOR	Unit	Result				
				EP2500078-005	-----	-----	-----	-----
				Result	---	---	---	---

EA055: Moisture Content (Dried @ 105-110°C)

Moisture Content	----	0.1	%	1.8	----	----	----	----
------------------	------	-----	---	-----	------	------	------	------

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	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0960_SD298_241217

Sampling date / time				17-Dec-2024 11:29	----	----	----	----
Compound	CAS Number	LOR	Unit	EP2500078-005	-----	-----	-----	-----
Result				---	---	---	---	---
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
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	%	95.5	----	----	----	----
13C8-PFOA	----	0.0002	%	89.5	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131



QA/QC Compliance Assessment to assist with Quality Review

Work Order : EP2500078

Page : 1 of 8

Client : GHD PTY LTD
Contact :
Project : 12641234 - PFAS OMP
Site : 0960_241218
Sampler :
Order number : 12641234

Laboratory : Environmental Division Perth
Telephone : +61-8-9406 1301
Date Samples Received : 06-Jan-2025
Issue Date : 15-Jan-2025
No. of samples received : 5
No. of samples analysed : 5

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- 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: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO ₄ 2- by DA	EP2500078--001	0960_MW147A_241217	Sulfate as SO ₄ - Turbidimetric	14808-79-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
ED045G: Chloride by Discrete Analyser	EP2500078--001	0960_MW147A_241217	Chloride	16887-00-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method	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 0960_SD298_241217	----	----	----	08-Jan-2025	31-Dec-2024	8

Matrix: **WATER**

Method	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
ED037P: Alkalinity by PC Titrator						
Clear Plastic Bottle - Natural 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	----	----	08-Jan-2025	31-Dec-2024	8
ED093F: Dissolved Major Cations						
Clear Plastic Bottle - Natural 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	----	----	08-Jan-2025	24-Dec-2024	15

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	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	4	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	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0960_SD298_241217	17-Dec-2024	----	----	----	08-Jan-2025	31-Dec-2024	✖
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0960_SD298_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✔	08-Jan-2025	17-Feb-2025	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0960_SD298_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✔	08-Jan-2025	17-Feb-2025	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0960_SD298_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✔	08-Jan-2025	17-Feb-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0960_SD298_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✔	08-Jan-2025	17-Feb-2025	✔
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0960_SD298_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✔	08-Jan-2025	17-Feb-2025	✔

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	---	---	---	08-Jan-2025	31-Dec-2024	✖
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	---	---	---	09-Jan-2025	14-Jan-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	----	----	----	09-Jan-2025	14-Jan-2025	✓
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural (ED093F) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	----	----	----	08-Jan-2025	24-Dec-2024	✗
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-SUT) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✓	08-Jan-2025	15-Jun-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-SUT) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✓	08-Jan-2025	15-Jun-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-SUT) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✓	08-Jan-2025	15-Jun-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-SUT) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✓	08-Jan-2025	15-Jun-2025	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-SUT) 0960_MW147A_241217, 0960_MW141C_241217,	0960_MW141B_241217, 0960_MW141D_241217	17-Dec-2024	08-Jan-2025	15-Jun-2025	✓	08-Jan-2025	15-Jun-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	1	5	20.00	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

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)							
Alkalinity by Auto Titrator	ED037-P	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	3	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	4	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Alkalinity by Auto Titrator	ED037-P	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	4	25.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	3	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard



Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	4	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	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 5.4, table B-15 requirements.
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
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.



<i>Analytical Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	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 concentrated, combined with an equal volume of reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
QuEChERS Extraction of Solids	* ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
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.



QUALITY CONTROL REPORT

Work Order : EP2500078

Page : 1 of 11

Client : GHD PTY LTD

Laboratory : Environmental Division Perth

Contact : [REDACTED]

Contact : [REDACTED]

Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000

Address : 26 Rigali Way Wangara WA Australia 6065

Telephone : ----

Telephone : +61-8-9406 1301

Project : 12641234 - PFAS OMP

Date Samples Received : 06-Jan-2025

Order number : 12641234

Date Analysis Commenced : 07-Jan-2025

C-O-C number : 77207

Issue Date : 15-Jan-2025

Sampler : [REDACTED]

Site : 0960_241218

Quote number : EP24GHDSE0016_V5

No. of samples received : 5

No. of samples analysed : 5



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]	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
[REDACTED]	Organic Supervisor	Perth Organics, Wangara, WA



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**

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: 6297797)									
EP2500078-005	0960_SD298_241217	EA055: Moisture Content	----	0.1	%	1.8	1.8	0.0	0% - 50%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6298428)									
EP2500123-043	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	0.0025	0.0023	8.1	0% - 50%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2500123-045	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	0.0057	0.0052	9.2	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6298428)									
EP2500123-043	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



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: 6298428) - continued									
EP2500123-043	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	0.0005	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<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
EP2500123-045	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	0.0012	0.0012	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: 6298428)							
EP2500123-043	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
EP2500123-045	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6298428) - continued									
EP2500123-045	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6298428)									
EP2500123-043	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
EP2500123-045	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
EP231P: PFAS Sums (QC Lot: 6298428)									
EP2500123-043	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0030	0.0028	6.9	0% - 50%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0025	0.0023	8.3	0% - 50%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0030	0.0028	6.9	0% - 50%
EP2500123-045	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0069	0.0064	7.5	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0057	0.0052	9.2	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0069	0.0064	7.5	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 (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6297456)									
EP2419454-003	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	178	178	0.0	0% - 20%



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6297456) - continued									
EP2419454-003	Anonymous	ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	178	178	0.0	0% - 20%
EP2500059-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	106	106	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	106	106	0.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6300441)									
EP2500133-006	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	186	183	1.8	0% - 20%
EP2500078-001	0960_MW147A_241217	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	4750	4610	3.2	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6300442)									
EP2500078-001	0960_MW147A_241217	ED045G: Chloride	16887-00-6	1	mg/L	34700	34600	0.4	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6296848)									
EP2500078-001	0960_MW147A_241217	ED093F: Calcium	7440-70-2	1 (2)*	mg/L	989	985	0.3	0% - 20%
		ED093F: Magnesium	7439-95-4	1 (2)*	mg/L	2560	2560	0.2	0% - 20%
		ED093F: Sodium	7440-23-5	1 (2)*	mg/L	19900	19800	0.5	0% - 20%
		ED093F: Potassium	7440-09-7	1 (2)*	mg/L	1170	1170	0.3	0% - 20%

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
		LCS	Low	High
Result				
<0.0002	0.0011 mg/kg	103	72.0	128
<0.0002	0.00125 mg/kg	110	73.0	123
<0.0002	0.00118 mg/kg	103	67.0	130
<0.0002	0.00119 mg/kg	106	70.0	132
<0.0002	0.00116 mg/kg	97.8	68.0	136
<0.0002	0.0012 mg/kg	105	70.0	130
<0.0002	0.0012 mg/kg	88.3	59.0	134
<0.001	0.00625 mg/kg	113	71.0	135
<0.0002	0.00125 mg/kg	95.2	69.0	132
<0.0002	0.00125 mg/kg	102	70.0	132
<0.0002	0.00125 mg/kg	106	71.0	131
<0.0002	0.00125 mg/kg	107	69.0	133
<0.0002	0.00125 mg/kg	106	72.0	129
<0.0002	0.00125 mg/kg	95.2	69.0	133
<0.0002	0.00125 mg/kg	94.8	64.0	136
<0.0002	0.00125 mg/kg	115	69.0	135
<0.0002	0.00125 mg/kg	111	66.0	139
<0.0005	0.00125 mg/kg	93.2	69.0	133
<0.0002	0.00125 mg/kg	92.8	67.0	137
<0.0005	0.00312 mg/kg	109	59.6	143
<0.0005	0.00312 mg/kg	101	62.8	140
<0.0005	0.00312 mg/kg	99.8	61.5	139
<0.0005	0.00312 mg/kg	124	61.9	139
<0.0002	0.00125 mg/kg	100	63.0	144
<0.0002	0.00125 mg/kg	118	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6298428) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	112	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	122	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	104	54.8	124
EP231P: PFAS Sums (QCLot: 6298428)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED037P: Alkalinity by PC Titrator (QCLot: 6297456)								
ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-00 1	1	mg/L	<1	----	----	----	----
ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----
ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	20 mg/L 200 mg/L	108 104	85.1 90.5	126 111
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6300441)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L 500 mg/L	95.7 91.9	89.9 89.9	112 112
ED045G: Chloride by Discrete Analyser (QCLot: 6300442)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L 1000 mg/L	97.9 101	88.6 88.6	113 113
ED093F: Dissolved Major Cations (QCLot: 6296848)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	100.0	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	95.1	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	98.8	91.4	113
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	94.4	84.6	108
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6298655)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	97.2	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	107	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	91.1	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	109	68.0	131



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6298655) - continued								
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	110	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	103	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	96.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6299296)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
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	100	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	97.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	104	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	94.8	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	98.1	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	96.3	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6298655)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	94.3	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	108	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	108	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	93.2	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	98.0	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	104	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	114	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	109	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	119	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	96.4	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	102	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6299296)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	89.5	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.4	72.0	129
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	89.0	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	86.6	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	108	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.6	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	99.0	72.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)
				Concentration		LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6299296) - continued								
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	87.6	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	106	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6298655)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	118	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	126	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	116	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	102	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	102	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	110	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	101	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6299296)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	107	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	90.2	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	104	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	106	62.2	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	101	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6298655)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	99.7	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	109	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	97.1	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	87.0	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6299296)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	99.9	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	96.5	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



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6299296) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	113	64.2	133
EP231P: PFAS Sums (QCLot: 6299296)								
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**

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: 6298428)							
EP2500123-043	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	98.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	109	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	99.2	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	79.4	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	101	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	92.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6298428)							
EP2500123-043	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	104	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	110	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	114	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	119	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	110	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	110	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	127	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	96.5	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.00125 mg/kg	91.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	99.2	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6298428)							
EP2500123-043	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	89.7	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	107	60.0	130



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6298428) - continued							
EP2500123-043	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	91.6	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	105	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	103	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	106	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	86.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6298428)							
EP2500123-043	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	95.3	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	113	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	108	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	113	60.0	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
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6300441)							
EP2500078-001	0960_MW147A_241217	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	# Not Determined	70.4	130
ED045G: Chloride by Discrete Analyser (QCLot: 6300442)							
EP2500078-001	0960_MW147A_241217	ED045G: Chloride	16887-00-6	200 mg/L	# Not Determined	70.0	130



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

20/1 1050

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
001	0960_MW021_			WATER	ALS: 0 Non ALS: 0	No
002	0960_MW113_			WATER	ALS: 0 Non ALS: 0	No
003	0960_MW114_			WATER	ALS: 0 Non ALS: 0	No
004	0960_MW233_			WATER	ALS: 0 Non ALS: 0	No
005	0960_MW211_			WATER	ALS: 0 Non ALS: 0	No
006	0960_MW162_			WATER	ALS: 0 Non ALS: 0	No
007	0960_MW164_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									

Environmental Division
Perth
Work Order Reference
EP2500743





CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

20/01 @ 1050

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
008	0960_MW018_			WATER	ALS: 0 Non ALS: 0	No	-									
009	0960_MW164_-1			WATER	ALS: 0 Non ALS: 0	No	-									
010	0960_MW165_			WATER	ALS: 0 Non ALS: 0	No	-									
011	0960_MW166_			WATER	ALS: 0 Non ALS: 0	No	-									
012	0960_MW167_			WATER	ALS: 0 Non ALS: 0	No	-									
013	0960_MW168_			WATER	ALS: 0 Non ALS: 0	No	-									
014	0960_MW112_			WATER	ALS: 0 Non ALS: 0	No	-									

ANALYSIS REQUIRED



ALS Laboratory: EP Perth
Environmental

DATE TIME:

/ EP2024GHDSER0016

Other comments:

[illegible]



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
022	0960_MW122_			WATER	ALS: 0 Non ALS: 0	No	-									
023	0960_MW146_			WATER	ALS: 0 Non ALS: 0	No	-									
024	0960_MW147_			WATER	ALS: 0 Non ALS: 0	No	-									
025	0960_MW180A_250116		16/01/2025 12:41 PM	WATER	ALS: 3 Non ALS: 0	No			X	X						
026	0960_MW181A_250116		16/01/2025 01:41 PM	WATER	ALS: 5 Non ALS: 0	No			X	X						
027	0960_MW172_			WATER	ALS: 0 Non ALS: 0	No	-									
028	0960_MW170_			WATER	ALS: 0 Non ALS: 0	No	-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
029	0960_MW127_			WATER	ALS: 0 Non ALS: 0	No
030	0960_MW126_			WATER	ALS: 0 Non ALS: 0	No
031	0960_MW139_			WATER	ALS: 0 Non ALS: 0	No
032	0960_MW140A_250116		16/01/2025 02:30 PM	WATER	ALS: 3 Non ALS: 0	No
033	0960_MW102_			WATER	ALS: 0 Non ALS: 0	No
034	0960_MW138_			WATER	ALS: 0 Non ALS: 0	No
035	0960_MW145_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
		X	X						
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
036	0960_MW103_			WATER	ALS: 0 Non ALS: 0	No
037	0960_MW104_			WATER	ALS: 0 Non ALS: 0	No
038	0960_MW134_			WATER	ALS: 0 Non ALS: 0	No
039	0960_MW135_			WATER	ALS: 0 Non ALS: 0	No
040	0960_MW175_			WATER	ALS: 0 Non ALS: 0	No
041	0960_MW124_			WATER	ALS: 0 Non ALS: 0	No
042	0960_MW144_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
043	0960_MW143_			WATER	ALS: 0 Non ALS: 0	No	-									
044	0960_MW137_			WATER	ALS: 0 Non ALS: 0	No	-									
045	0960_MW176_			WATER	ALS: 0 Non ALS: 0	No	-									
046	0960_MW177_			WATER	ALS: 0 Non ALS: 0	No	-									
047	0960_MW178_			WATER	ALS: 0 Non ALS: 0	No	-									
048	0960_MW179_			WATER	ALS: 0 Non ALS: 0	No	-									
049	0960_MW141_			WATER	ALS: 0 Non ALS: 0	No	-									

ANALYSIS REQUIRED



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
050	0960_OTH132_			WATER	ALS: 0 Non ALS: 0	No
051	0960_OTH134_			WATER	ALS: 0 Non ALS: 0	No
052	0960_OTH129_			WATER	ALS: 0 Non ALS: 0	No
053	0960_OTH103_			WATER	ALS: 0 Non ALS: 0	No
054	0960_OTH106_250116		16/01/2025 07:31 AM	WATER	ALS: 3 Non ALS: 0	No
055	0960_OTH107_250116		16/01/2025 07:43 AM	WATER	ALS: 3 Non ALS: 0	No
056	0960_SW108_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water	Groundwater - Major Ions	Groundwater - PFAS	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
						X		X	
						X		X	
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
057	0960_SW113_			WATER	ALS: 0 Non ALS: 0	No
058	0960_SW114_			WATER	ALS: 0 Non ALS: 0	No
059	0960_SW121_			WATER	ALS: 0 Non ALS: 0	No
060	0960_SW122_			WATER	ALS: 0 Non ALS: 0	No
061	0960_SW123_			WATER	ALS: 0 Non ALS: 0	No
062	0960_SW124_			WATER	ALS: 0 Non ALS: 0	No
063	0960_SW125_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
064	0960_SW157_			WATER	ALS: 0 Non ALS: 0	No
065	0960_SW166_			WATER	ALS: 0 Non ALS: 0	No
066	0960_SW168_			WATER	ALS: 0 Non ALS: 0	No
067	0960_SW170_			WATER	ALS: 0 Non ALS: 0	No
068	0960_SW174_			WATER	ALS: 0 Non ALS: 0	No
069	0960_SW176_			WATER	ALS: 0 Non ALS: 0	No
070	0960_SW189_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

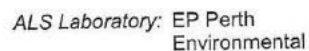
°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
071	0960_SW190_			WATER	ALS: 0 Non ALS: 0	No	-									
072	0960_SW192_			WATER	ALS: 0 Non ALS: 0	No	-									
073	0960_SW193_			WATER	ALS: 0 Non ALS: 0	No	-									
074	0960_SW198_			WATER	ALS: 0 Non ALS: 0	No	-									
075	0960_SW199_			WATER	ALS: 0 Non ALS: 0	No	-									
076	0960_SW200_			WATER	ALS: 0 Non ALS: 0	No	-									
077	0960_SW219_			WATER	ALS: 0 Non ALS: 0	No	-									

ANALYSIS REQUIRED



DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

EMAIL INVOICES TO:

Biohazard info:

QUOTE NO: EP24GHDSER0016

/ EP2024GHDSER0016

Other comments:

C

ANALYSIS REQUIRED

23 of 48



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
085	0960_SW278_			WATER	ALS: 0 Non ALS: 0	No
086	0960_SW279_			WATER	ALS: 0 Non ALS: 0	No
087	0960_SW288_			WATER	ALS: 0 Non ALS: 0	No
088	0960_SW291_			WATER	ALS: 0 Non ALS: 0	No
089	0960_SW292_			WATER	ALS: 0 Non ALS: 0	No
090	0960_SW293_			WATER	ALS: 0 Non ALS: 0	No
091	0960_SW298_			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water	Groundwater - Major Ions	Groundwater - PFAS	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									

 CHAIN OF CUSTODY COC#: 77903 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:																																																																																																																																																								
CLIENT: GHDSER - GHD PTY LTD PROJECT: 12641234 - PFAS OMP SITE: 0960 RAAF Learmonth ORDER NO: 12641234 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED] EMAIL INVOICES TO: [REDACTED]		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:																																																																																																																																																									
CONTACT PH: [REDACTED] SAMPLER MOBILE: [REDACTED] QUOTE NO: EP24GHDSER0016 / EP2024GHDSER0016																																																																																																																																																													
<table><thead><tr><th colspan="7">SAMPLE DETAILS</th><th colspan="8">ANALYSIS REQUIRED</th></tr><tr><th>SAMPLE</th><th>NAME</th><th>DESCRIPTION</th><th>DATE / TIME</th><th>MATRIX</th><th>TOTAL BOTTLES</th><th>ON HOLD</th><th>Analysis NOT REQUIRED</th><th>Field Blank (PFAS) - Water WATER</th><th>Groundwater - Major Ions GROUNDWATER</th><th>Groundwater - PFAS GROUNDWATER</th><th>Rinsate (PFAS) RINSATE</th><th>Soil & Sediment - PFAS SOIL</th><th>Surface/Pore Water - Major Ions SURFACE WATER</th><th>Surface/Pore Water - PFAS SURFACE WATER</th><th>Surface/Pore Water - SUT PFAS WATER</th><th>ALTERNATIVE ANALYSIS</th></tr></thead><tbody><tr><td>092</td><td>0960_SW001_</td><td></td><td></td><td>WATER</td><td>ALS: 0 Non ALS: 0</td><td>No</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>093</td><td>0960_SW205_250116</td><td></td><td>16/01/2025 08:19 AM</td><td>WATER</td><td>ALS: 3 Non ALS: 0</td><td>No</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td></tr><tr><td>094</td><td>0960_SW207_250116</td><td></td><td>16/01/2025 08:48 AM</td><td>WATER</td><td>ALS: 7 Non ALS: 0</td><td>No</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td></td><td></td></tr><tr><td>095</td><td>0960_SW208_</td><td></td><td></td><td>WATER</td><td>ALS: 0 Non ALS: 0</td><td>No</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>096</td><td>0960_SW209_</td><td></td><td></td><td>WATER</td><td>ALS: 0 Non ALS: 0</td><td>No</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>097</td><td>0960_SW210_</td><td></td><td></td><td>WATER</td><td>ALS: 0 Non ALS: 0</td><td>No</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>098</td><td>0960_SW211_</td><td></td><td></td><td>WATER</td><td>ALS: 0 Non ALS: 0</td><td>No</td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>							SAMPLE DETAILS							ANALYSIS REQUIRED								SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	092	0960_SW001_			WATER	ALS: 0 Non ALS: 0	No	-										093	0960_SW205_250116		16/01/2025 08:19 AM	WATER	ALS: 3 Non ALS: 0	No							X	X			094	0960_SW207_250116		16/01/2025 08:48 AM	WATER	ALS: 7 Non ALS: 0	No							X	X			095	0960_SW208_			WATER	ALS: 0 Non ALS: 0	No	-										096	0960_SW209_			WATER	ALS: 0 Non ALS: 0	No	-										097	0960_SW210_			WATER	ALS: 0 Non ALS: 0	No	-										098	0960_SW211_			WATER	ALS: 0 Non ALS: 0	No	-									
SAMPLE DETAILS							ANALYSIS REQUIRED																																																																																																																																																						
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS																																																																																																																																													
092	0960_SW001_			WATER	ALS: 0 Non ALS: 0	No	-																																																																																																																																																						
093	0960_SW205_250116		16/01/2025 08:19 AM	WATER	ALS: 3 Non ALS: 0	No							X	X																																																																																																																																															
094	0960_SW207_250116		16/01/2025 08:48 AM	WATER	ALS: 7 Non ALS: 0	No							X	X																																																																																																																																															
095	0960_SW208_			WATER	ALS: 0 Non ALS: 0	No	-																																																																																																																																																						
096	0960_SW209_			WATER	ALS: 0 Non ALS: 0	No	-																																																																																																																																																						
097	0960_SW210_			WATER	ALS: 0 Non ALS: 0	No	-																																																																																																																																																						
098	0960_SW211_			WATER	ALS: 0 Non ALS: 0	No	-																																																																																																																																																						



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

-C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
099	0960_SW300_			WATER	ALS: 0 Non ALS: 0	No	-									
100	0960_SW301_250116		16/01/2025 09:15 AM	WATER	ALS: 3 Non ALS: 0	No							X	X		
101	0960_SW302_			WATER	ALS: 0 Non ALS: 0	No	-									
102	0960_SW303_			WATER	ALS: 0 Non ALS: 0	No	-									
103	0960_SW304_			WATER	ALS: 0 Non ALS: 0	No	-									
104	0960_SW305_250116		16/01/2025 10:13 AM	WATER	ALS: 3 Non ALS: 0	No							X	X		
105	0960_SD199_			SOIL	ALS: 0 Non ALS: 0	No	-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
106	0960_SD200_			SOIL	ALS: 0 Non ALS: 0	No	-									
107	0960_SD219_			SOIL	ALS: 0 Non ALS: 0	No	-									
108	0960_SD108_			SOIL	ALS: 0 Non ALS: 0	No	-									
109	0960_SD113_			SOIL	ALS: 0 Non ALS: 0	No	-									
110	0960_SS114_			SOIL	ALS: 0 Non ALS: 0	No	-									
111	0960_SS121_			SOIL	ALS: 0 Non ALS: 0	No	-									
112	0960_SS122_			SOIL	ALS: 0 Non ALS: 0	No	-									

ANALYSIS REQUIRED



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
113	0960_SS123_			SOIL	ALS: 0 Non ALS: 0	No
114	0960_SS124_			SOIL	ALS: 0 Non ALS: 0	No
115	0960_SS125_			SOIL	ALS: 0 Non ALS: 0	No
116	0960_SS157_			SOIL	ALS: 0 Non ALS: 0	No
117	0960_SS166_			SOIL	ALS: 0 Non ALS: 0	No
118	0960_SS168_			SOIL	ALS: 0 Non ALS: 0	No
119	0960_SS170_			SOIL	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
120	0960_SS174_			SOIL	ALS: 0 Non ALS: 0	No
121	0960_SS176_			SOIL	ALS: 0 Non ALS: 0	No
122	0960_SS189_			SOIL	ALS: 0 Non ALS: 0	No
123	0960_SS190_			SOIL	ALS: 0 Non ALS: 0	No
124	0960_SS192_			SOIL	ALS: 0 Non ALS: 0	No
125	0960_SS193_			SOIL	ALS: 0 Non ALS: 0	No
126	0960_SS227_			SOIL	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
127	0960_SS231_			SOIL	ALS: 0 Non ALS: 0	No
128	0960_SS234_			SOIL	ALS: 0 Non ALS: 0	No
129	0960_SS235_			SOIL	ALS: 0 Non ALS: 0	No
130	0960_SS243_			SOIL	ALS: 0 Non ALS: 0	No
131	0960_SS265_			SOIL	ALS: 0 Non ALS: 0	No
132	0960_SS277_			SOIL	ALS: 0 Non ALS: 0	No
133	0960_SS278_			SOIL	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
-									
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
134	0960_SS279_			SOIL	ALS: 0 Non ALS: 0	No	-									
135	0960_SS288_			SOIL	ALS: 0 Non ALS: 0	No	-									
136	0960_SS291_			SOIL	ALS: 0 Non ALS: 0	No	-									
137	0960_SS292_			SOIL	ALS: 0 Non ALS: 0	No	-									
138	0960_SS293_			SOIL	ALS: 0 Non ALS: 0	No	-									
139	0960_SS298_			SOIL	ALS: 0 Non ALS: 0	No	-									
140	0960_SD205_250116		16/01/2025 08:20 AM	SOIL	ALS: 1 Non ALS: 0	No						X				

Friday, January 17, 2025

3:26:56 AM



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
141	0960_SD207_250116		16/01/2025 08:49 AM	SOIL	ALS: 1 Non ALS: 0	No
142	0960_SD208_			SOIL	ALS: 0 Non ALS: 0	No
143	0960_SD209_			SOIL	ALS: 0 Non ALS: 0	No
144	0960_SD210_			SOIL	ALS: 0 Non ALS: 0	No
145	0960_SD211_			SOIL	ALS: 0 Non ALS: 0	No
146	0960_SD300_			SOIL	ALS: 0 Non ALS: 0	No
147	0960_SD301_			SOIL	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
					X				
-									
-									
-									
-									
-									
-									



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

EMAIL INVOICES TO:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
148	0960_SD302_			SOIL	ALS: 0 Non ALS: 0	No	-									
149	0960_SD303_			SOIL	ALS: 0 Non ALS: 0	No	-									
150	0960_SD304_			SOIL	ALS: 0 Non ALS: 0	No	-									
151	0960_SD305_250116		16/01/2025 10:14 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
152	0960_SS301_			SOIL	ALS: 0 Non ALS: 0	No	-									
153	0960_SD009_250116		16/01/2025 09:16 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
154	0960_QC115_250116		16/01/2025 12:42 PM	WATER	ALS: 2 Non ALS: 0	No				X						



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD
155	0960_QC116_250116		16/01/2025 01:42 PM	WATER	ALS: 2 Non ALS: 0	No
156	0960_QC410_250116		16/01/2025 01:47 PM	WATER	ALS: 2 Non ALS: 0	No
157	0960_QC310_250116		16/01/2025 01:50 PM	WATER	ALS: 2 Non ALS: 0	No
158	0960_QC117_250116		16/01/2025 02:31 PM	WATER	ALS: 2 Non ALS: 0	No
159	0960_QC507_250116			WATER	ALS: 0 Non ALS: 0	No

ANALYSIS REQUIRED

Analysis NOT REQUIRED	Field Blank (PFAS) - Water WATER	Groundwater - Major Ions GROUNDWATER	Groundwater - PFAS GROUNDWATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - Major Ions SURFACE WATER	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS
			X						
	Partial 1/3								
				Partial 1/3					
			X						
	Partial 1/3								



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

CONTACT PH:

SAMPLER MOBILE:

PRIMARY SAMPLER:

QUOTE NO: EP24GHD SER0016

/ EP2024GHD SER0016

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE	SAMPLE NAME	PARTIAL ANALYSIS GROUP NAME	MATRIX	SELECTED ANALYSIS NAME
156	0960_QC410_250116	Field Blank (PFAS) - Water WATER	WATER	- EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30 analytes)
157	0960_QC310_250116	Rinsate (PFAS) RINSATE	WATER	- EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30 analytes)
159	0960_QC507_250116	Field Blank (PFAS) - Water WATER	WATER	- EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30 analytes)



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE:

/ EP2024GHDSER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
025	0960_MW180A_250116	Clear Plastic Bottle - Natural	125 mL	00071122020098	Green	No	
025	0960_MW180A_250116	HDPE (no PTFE)	20 mL	00352312060808	Grey	No	
025	0960_MW180A_250116	HDPE (no PTFE)	20 mL	00352312060693	Grey	No	
026	0960_MW181A_250116	Clear Plastic Bottle - Natural	125 mL	00071122020090	Green	No	
026	0960_MW181A_250116	HDPE (no PTFE)	20 mL	00350522046575	Grey	No	
026	0960_MW181A_250116	HDPE (no PTFE)	20 mL	00350522046493	Grey	No	
026	0960_MW181A_250116	HDPE (no PTFE)	20 mL	00352312061251	Grey	No	
026	0960_MW181A_250116	HDPE (no PTFE)	20 mL	00352312060591	Grey	No	
032	0960_MW140A_250116	HDPE (no PTFE)	20 mL	00350522046458	Grey	No	
032	0960_MW140A_250116	HDPE (no PTFE)	20 mL	00350522046427	Grey	No	
032	0960_MW140A_250116	Clear Plastic Bottle - Natural	125 mL	00071122020032	Green	No	
054	0960_OTH106_250116	Clear Plastic Bottle - Natural	125 mL	00071122020079	Green	No	
054	0960_OTH106_250116	HDPE (no PTFE)	125 mL	00351223004808	Grey	No	
054	0960_OTH106_250116	HDPE (no PTFE)	125 mL	00351223004781	Grey	No	
055	0960_OTH107_250116	Clear Plastic Bottle - Natural	125 mL	00070523130843	Green	No	
055	0960_OTH107_250116	HDPE (no PTFE)	125 mL	00351223005036	Grey	No	
055	0960_OTH107_250116	HDPE (no PTFE)	125 mL	00351223004956	Grey	No	
093	0960_SW205_250116	Clear Plastic Bottle - Natural	125 mL	00071122020196	Green	No	
093	0960_SW205_250116	HDPE (no PTFE)	20 mL	00350522046190	Grey	No	
093	0960_SW205_250116	HDPE (no PTFE)	20 mL	00350522046437	Grey	No	
094	0960_SW207_250116	HDPE (no PTFE)	20 mL	00350522046356	Grey	No	
094	0960_SW207_250116	HDPE (no PTFE)	20 mL	00350522046435	Grey	No	
094	0960_SW207_250116	Clear Plastic Bottle - Natural	125 mL	00070523130787	Green	No	
094	0960_SW207_250116	HDPE (no PTFE)	20 mL	00350522046351	Grey	No	
094	0960_SW207_250116	HDPE (no PTFE)	20 mL	00350522046426	Grey	No	
094	0960_SW207_250116	HDPE (no PTFE)	20 mL	00352312060813	Grey	No	

Friday, January 17, 2025

3:26:56 AM



CHAIN OF CUSTODY

COC#: 77903

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: 12641234 - PFAS OMP

SITE: 0960 RAAF Learmonth

ORDER NO: 12641234

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE:

/ EP2024GHD SER0016

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

EMAIL INVOICES TO:

094	0960_SW207_250116	HDPE (no PTFE)	20 mL	00352312060583	Grey	No	
100	0960_SW301_250116	Clear Plastic Bottle - Natural	125 mL	00070523130822	Green	No	
100	0960_SW301_250116	HDPE (no PTFE)	20 mL	00350522046573	Grey	No	
100	0960_SW301_250116	HDPE (no PTFE)	20 mL	00350522046370	Grey	No	
104	0960_SW301_250116	Clear Plastic Bottle - Natural	125 mL	00071122019936	Green	No	
104	0960_SW305_250116	HDPE (no PTFE)	20 mL	00352312060978	Grey	No	
104	0960_SW305_250116	HDPE (no PTFE)	20 mL	00352312060921	Grey	No	
104	0960_SW305_250116	HDPE Soil Jar	200 mL	00621222007684	Grey	No	
140	0960_SD205_250116	HDPE Soil Jar	200 mL	00621222007639	Grey	No	
141	0960_SD207_250116	HDPE Soil Jar	200 mL	00621222007571	Grey	No	
151	0960_SD305_250116	HDPE Soil Jar	200 mL	00621222007601	Grey	No	
153	0960_SD009_250116	HDPE (no PTFE)	20 mL	00352312060530	Grey	No	
154	0960_QC115_250116	HDPE (no PTFE)	20 mL	00352312061002	Grey	No	
154	0960_QC115_250116	HDPE (no PTFE)	20 mL	00350522046543	Grey	No	
155	0960_QC116_250116	HDPE (no PTFE)	20 mL	00350522046434	Grey	No	
155	0960_QC116_250116	HDPE (no PTFE)	125 mL	00351223004838	Grey	No	
156	0960_QC410_250116	HDPE (no PTFE)	125 mL	00351223004900	Grey	No	
156	0960_QC410_250116	HDPE (no PTFE)	125 mL	00351223004797	Grey	No	
157	0960_QC310_250116	HDPE (no PTFE)	125 mL	0035113004827	Grey	No	
157	0960_QC310_250116	HDPE (no PTFE)	20 mL	00352312075799	Grey	No	
158	0960_QC117_250116	HDPE (no PTFE)	20 mL	00352312076587	Grey	No	
158	0960_QC117_250116	HDPE (no PTFE)					

Total Bottle Count: ALS: 47, Non ALS: 0



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EP2500743

Client : GHD PTY LTD
Contact :
Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000

E-mail :
Telephone : ----
Facsimile : ----

Project : 12641234 - PFAS OMP
Order number : 12641234

C-O-C number : 77903
Site : 0960 RAAF Learmonth
Sampler :

Laboratory : Environmental Division Perth
Contact :
Address : 26 Rigali Way Wangara WA Australia
6065

E-mail :
alsglobal.com
Telephone : +61-8-9406 1301
Facsimile : +61-8-9406 1399

Page : 1 of 3
Quote number : EP2024GHDSE0016_V5
(EP24GHDSE0016_V5)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 20-Jan-2025 10:50
Client Requested Due : 28-Jan-2025
Date

Issue Date : 21-Jan-2025
Scheduled Reporting Date : 28-Jan-2025

Delivery Details

Mode of Delivery : Carrier
No. of coolers/boxes : 5
Receipt Detail :

Security Seal : Not Available
Temperature : 20.2 - Ice present
No. of samples received / analysed : 19 / 19

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Please see scanned COC for sample discrepancies: extra samples , samples not received etc.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (Samples.Perth@alsglobal.com)
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Perth, NATA accreditation no. 825, site no. 15847.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **pH analysis should be conducted within 6 hours of sampling.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X-EP (solids) PFAS - Full Suite (30 analytes)
EP2500743-140	16-Jan-2025 08:20	0960_SD205_250116	✓	✓
EP2500743-141	16-Jan-2025 08:49	0960_SD207_250116	✓	✓
EP2500743-151	16-Jan-2025 10:14	0960_SD305_250116	✓	✓
EP2500743-153	16-Jan-2025 09:16	0960_SD009_250116	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30)	WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity
EP2500743-025	16-Jan-2025 12:41	0960_MW180A_250116	✓		✓
EP2500743-026	16-Jan-2025 13:41	0960_MW181A_250116	✓		✓
EP2500743-032	16-Jan-2025 14:30	0960_MW140A_250116	✓		✓
EP2500743-054	16-Jan-2025 07:31	0960_OTH106_250116		✓	✓
EP2500743 055	16 Jan 2025 07 43	0960_OTH107_250116		✓	✓
EP2500743-093	16-Jan-2025 08:19	0960_SW205_250116	✓		✓
EP2500743-094	16-Jan-2025 08:48	0960_SW207_250116	✓		✓
EP2500743-100	16-Jan-2025 09:15	0960_SW301_250116	✓		✓
EP2500743-104	16-Jan-2025 10:13	0960_SW305_250116	✓		✓
EP2500743-154	16-Jan-2025 12:42	0960_QC115_250116	✓		
EP2500743-155	16-Jan-2025 13:42	0960_QC116_250116	✓		
EP2500743-156	16-Jan-2025 13:47	0960_QC410_250116		✓	
EP2500743-157	16-Jan-2025 13:50	0960_QC310_250116		✓	
EP2500743-158	16-Jan-2025 14:31	0960_QC117_250116	✓		
EP2500743 159	17 Jan 2025 11 25	0960_QC507_250116		✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

Accounts Payable Australia

- A4 - AU Tax Invoice (INV)

Email



DERP LAB REPORTS

- EDI Format - ESDAT (ESDAT)

Email



- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

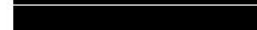
Email



Email



Email



Email



Email



Email



Email



LAB REPORTS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email



Email



Email



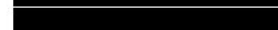
Email



Email



Email



Email



- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email



Email



Email



Email



Email



Email



Email



- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email



Email



Email



Email



Email



Email



Email





CERTIFICATE OF ANALYSIS

Work Order : **EP2500743**
Client : **GHD PTY LTD**
Contact : **[REDACTED]**
Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000
Telephone : ----
Project : 12641234 - PFAS OMP
Order number : 12641234
C-O-C number : 77903
Sampler : **[REDACTED]**
Site : 0960 RAAF Learmonth
Quote number : EP24GHDSE0016_V5
No. of samples received : 19
No. of samples analysed : 19

Page : 1 of 18
Laboratory : Environmental Division Perth
Contact : **[REDACTED]**
Address : 26 Rigali Way Wangara WA Australia 6065
Telephone : +61-8-9406 1301
Date Samples Received : 20-Jan-2025 10:50
Date Analysis Commenced : 21-Jan-2025
Issue Date : 29-Jan-2025 22:09



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
[REDACTED]	Organic Supervisor	Perth Organics, Wangara, WA



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.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO₂ and Fluoride to the Anions.
- Ionic Balance out of acceptable limits for sample #25, 26 and 32 due to analytes not quantified in this report. Major cations (ED093F) and major anions (ED041G/ED045G) have been confirmed by re-analysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- 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. 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.
- 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.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW180A_25011 6	0960_MW181A_25011 6	0960_MW140A_25011 6	0960_QC115_250116	0960_QC116_250116
Sampling date / time				16-Jan-2025 12:41	16-Jan-2025 13:41	16-Jan-2025 14:30	16-Jan-2025 12:42	16-Jan-2025 13:42
Compound	CAS Number	LOR	Unit	EP2500743-025	EP2500743-026	EP2500743-032	EP2500743-154	EP2500743-155
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	----	----
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	148	234	178	----	----
Total Alkalinity as CaCO ₃	----	1	mg/L	148	234	178	----	----
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	5040	6820	5100	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	27500	35500	32500	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	776	984	789	----	----
Magnesium	7439-95-4	1	mg/L	2500	3180	2900	----	----
Sodium	7440-23-5	1	mg/L	19600	24500	22600	----	----
Potassium	7440-09-7	1	mg/L	1290	1180	1100	----	----
EN055: Ionic Balance								
☐ Total Anions	----	0.01	meq/L	884	1150	1030	----	----
☐ Total Cations	----	0.01	meq/L	1130	1410	1290	----	----
☐ Ionic Balance	----	0.01	%	12.2	10.1	11.3	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<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



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW180A_25011 6	0960_MW181A_25011 6	0960_MW140A_25011 6	0960_QC115_250116	0960_QC116_250116
Sampling date / time				16-Jan-2025 12:41	16-Jan-2025 13:41	16-Jan-2025 14:30	16-Jan-2025 12:42	16-Jan-2025 13:42	
Compound	CAS Number	LOR	Unit	EP2500743-025	EP2500743-026	EP2500743-032	EP2500743-154	EP2500743-155	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<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	
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	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW180A_25011 6	0960_MW181A_25011 6	0960_MW140A_25011 6	0960_QC115_250116	0960_QC116_250116
Sampling date / time				16-Jan-2025 12:41	16-Jan-2025 13:41	16-Jan-2025 14:30	16-Jan-2025 12:42	16-Jan-2025 13:42
Compound	CAS Number	LOR	Unit	EP2500743-025	EP2500743-026	EP2500743-032	EP2500743-154	EP2500743-155
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
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	%	107	99.8	102	114	106
13C8-PFOA	----	0.02	%	112	108	99.1	94.2	118



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC410_250116	0960_QC310_250116	0960_QC117_250116	0960_QC507_250116	----
Sampling date / time					16-Jan-2025 13:47	16-Jan-2025 13:50	16-Jan-2025 14:31	17-Jan-2025 11:25	----
Compound	CAS Number	LOR	Unit	EP2500743-156	EP2500743-157	EP2500743-158	EP2500743-159	-----	
				Result	Result	Result	Result	—	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	----	<0.0020	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	<0.02	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	<0.02	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	<0.02	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	<0.01	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	<0.02	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	<0.0002	----	<0.0002	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	<0.01	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	<0.02	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	<0.02	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	<0.1	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	<0.02	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	<0.02	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	<0.02	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC410_250116	0960_QC310_250116	0960_QC117_250116	0960_QC507_250116	----
Sampling date / time				16-Jan-2025 13:47	16-Jan-2025 13:50	16-Jan-2025 14:31	17-Jan-2025 11:25	----
Compound	CAS Number	LOR	Unit	EP2500743-156	EP2500743-157	EP2500743-158	EP2500743-159	-----
				Result	Result	Result	Result	---
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
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	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	----	<0.0020	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----
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: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC410_250116	0960_QC310_250116	0960_QC117_250116	0960_QC507_250116	----
Sampling date / time					16-Jan-2025 13:47	16-Jan-2025 13:50	16-Jan-2025 14:31	17-Jan-2025 11:25	----
Compound	CAS Number	LOR	Unit	EP2500743-156	EP2500743-157	EP2500743-158	EP2500743-159	-----	
				Result	Result	Result	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	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	----	<0.001	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	----	<0.001	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	----	<0.001	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	----	<0.001	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	----	<0.0005	----	
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	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC410_250116	0960_QC310_250116	0960_QC117_250116	0960_QC507_250116	----
Sampling date / time				16-Jan-2025 13:47	16-Jan-2025 13:50	16-Jan-2025 14:31	17-Jan-2025 11:25	----
Compound	CAS Number	LOR	Unit	EP2500743-156	EP2500743-157	EP2500743-158	EP2500743-159	-----
				Result	Result	Result	Result	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	<0.05	----	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	----	<0.001	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	----	<0.001	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	----	<0.001	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	----	<0.001	----
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	----	----
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	<0.0002	----	<0.0002	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	<0.0002	----	<0.0002	----
^ Sum of PFAS	----	0.0002	µg/L	<0.0002	<0.0002	----	<0.0002	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	----	----	110	----	----
13C8-PFOA	----	0.02	%	----	----	104	----	----
13C4-PFOS	----	0.0005	%	109	101	----	106	----
13C8-PFOA	----	0.0005	%	105	98.2	----	102	----

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0960_SD205_250116	0960_SD207_250116	0960_SD305_250116	0960_SD009_250116	----
Sampling date / time				16-Jan-2025 08:20	16-Jan-2025 08:49	16-Jan-2025 10:14	16-Jan-2025 09:16	----
Compound	CAS Number	LOR	Unit	EP2500743-140	EP2500743-141	EP2500743-151	EP2500743-153	-----
				Result	Result	Result	Result	—
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	25.0	22.1	28.6	19.6	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<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	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<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	----
EP231C: Perfluoroalkyl Sulfonamides								



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0960_SD205_250116	0960_SD207_250116	0960_SD305_250116	0960_SD009_250116	----
Sampling date / time				16-Jan-2025 08:20	16-Jan-2025 08:49	16-Jan-2025 10:14	16-Jan-2025 09:16	----
Compound	CAS Number	LOR	Unit	EP2500743-140	EP2500743-141	EP2500743-151	EP2500743-153	-----
				Result	Result	Result	Result	---
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	96.0	101	95.0	87.5	----
13C8-PFOA	----	0.0002	%	87.0	94.0	90.0	87.5	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW205_250116	0960_SW207_250116	0960_SW301_250116	0960_SW305_250116	----
Sampling date / time				16-Jan-2025 08:19	16-Jan-2025 08:48	16-Jan-2025 09:15	16-Jan-2025 10:13	----	
Compound	CAS Number	LOR	Unit	EP2500743-093	EP2500743-094	EP2500743-100	EP2500743-104	-----	
				Result	Result	Result	Result	---	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	193	196	190	144	----	
Total Alkalinity as CaCO3	----	1	mg/L	193	196	190	144	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	3470	3290	3760	3090	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	24300	24300	26200	21700	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	526	516	599	449	----	
Magnesium	7439-95-4	1	mg/L	1750	1700	1920	1510	----	
Sodium	7440-23-5	1	mg/L	13000	12800	14300	11400	----	
Potassium	7440-09-7	1	mg/L	733	714	820	556	----	
EN055: Ionic Balance									
∅ Total Anions	----	0.01	meq/L	762	758	821	679	----	
∅ Total Cations	----	0.01	meq/L	754	741	831	657	----	
∅ Ionic Balance	----	0.01	%	0.47	1.15	0.59	1.69	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<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	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW205_250116	0960_SW207_250116	0960_SW301_250116	0960_SW305_250116	----
Sampling date / time					16-Jan-2025 08:19	16-Jan-2025 08:48	16-Jan-2025 09:15	16-Jan-2025 10:13	----
Compound	CAS Number	LOR	Unit	EP2500743-093	EP2500743-094	EP2500743-100	EP2500743-104	-----	
				Result	Result	Result	Result	---	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	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	----	
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	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW205_250116	0960_SW207_250116	0960_SW301_250116	0960_SW305_250116	----
Sampling date / time					16-Jan-2025 08:19	16-Jan-2025 08:48	16-Jan-2025 09:15	16-Jan-2025 10:13	----
Compound	CAS Number	LOR	Unit	EP2500743-093	EP2500743-094	EP2500743-100	EP2500743-104	-----	
				Result	Result	Result	Result	---	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	%	96.5	110	110	112	----	
13C8-PFOA	----	0.02	%	111	101	101	108	----	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_OTH106_25011 6	0960_OTH107_25011 6	----	----	----
Sampling date / time				16-Jan-2025 07:31	16-Jan-2025 07:43	----	----	----
Compound	CAS Number	LOR	Unit	EP2500743-054	EP2500743-055	-----	-----	-----
				Result	Result	—	—	—
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	----	----	----
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	123	124	----	----	----
Total Alkalinity as CaCO ₃	----	1	mg/L	123	124	----	----	----
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA								
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	3120	2960	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	17900	17300	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	440	431	----	----	----
Magnesium	7439-95-4	1	mg/L	1500	1460	----	----	----
Sodium	7440-23-5	1	mg/L	11400	11000	----	----	----
Potassium	7440-09-7	1	mg/L	552	533	----	----	----
EN055: Ionic Balance								
☐ Total Anions	----	0.01	meq/L	572	552	----	----	----
☐ Total Cations	----	0.01	meq/L	655	634	----	----	----
☐ Ionic Balance	----	0.01	%	6.76	6.88	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	<0.0002	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0960_OTH106_25011 6	0960_OTH107_25011 6	----	----	----
Sampling date / time					16-Jan-2025 07:31	16-Jan-2025 07:43	----	----	----
Compound	CAS Number	LOR	Unit		EP2500743-054	EP2500743-055	-----	-----	-----
				Result	Result		---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L		<0.0005	<0.0005	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L		<0.0020	<0.0020	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L		<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L		<0.001	<0.001	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L		<0.001	<0.001	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L		<0.001	<0.001	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L		<0.001	<0.001	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L		<0.0005	<0.0005	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0960_OTH106_25011 6	0960_OTH107_25011 6	----	----	----
Sampling date / time				16-Jan-2025 07:31	16-Jan-2025 07:43	----	----	----
Compound	CAS Number	LOR	Unit	EP2500743-054	EP2500743-055	-----	-----	-----
				Result	Result	—	—	—
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	----	----	----
EP231P: PFAS Sums								
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	<0.0002	----	----	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	<0.0002	----	----	----
^ Sum of PFAS	----	0.0002	µg/L	<0.0002	<0.0002	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0005	%	99.3	99.4	----	----	----
13C8-PFOA	----	0.0005	%	95.0	92.8	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133



QA/QC Compliance Assessment to assist with Quality Review

Work Order : EP2500743

Page : 1 of 9

Client : GHD PTY LTD
Contact :
Project : 12641234 - PFAS OMP
Site : 0960 RAAF Learmonth
Sampler :
Order number : 12641234

Laboratory : Environmental Division Perth
Telephone : +61-8-9406 1301
Date Samples Received : 20-Jan-2025
Issue Date : 29-Jan-2025
No. of samples received : 19
No. of samples analysed : 19

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO ₄ 2- by DA	EP2500729--001	Anonymous	Sulfate as SO ₄ - Turbidimetric	14808-79-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
ED045G: Chloride by Discrete Analyser	EP2500729--001	Anonymous	Chloride	16887-00-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Method	Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	20	5.00	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: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0960_SD205_250116, 0960_SD305_250116,	0960_SD207_250116, 0960_SD009_250116	16-Jan-2025	----	----	----	21-Jan-2025	30-Jan-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0960_SD205_250116, 0960_SD305_250116,	0960_SD207_250116, 0960_SD009_250116	16-Jan-2025	23-Jan-2025	15-Jul-2025	✓	23-Jan-2025	04-Mar-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0960_SD205_250116, 0960_SD305_250116,	0960_SD207_250116, 0960_SD009_250116	16-Jan-2025	23-Jan-2025	15-Jul-2025	✓	23-Jan-2025	04-Mar-2025	✓

Page : 3 of 9
 Work Order : EP2500743
 Client : GHD PTY LTD
 Project : 12641234 - PFAS OMP



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0960_SD205_250116, 0960_SD305_250116,	0960_SD207_250116, 0960_SD009_250116	16-Jan-2025	23-Jan-2025	15-Jul-2025	✓	23-Jan-2025	04-Mar-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0960_SD205_250116, 0960_SD305_250116,	0960_SD207_250116, 0960_SD009_250116	16-Jan-2025	23-Jan-2025	15-Jul-2025	✓	23-Jan-2025	04-Mar-2025	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0960_SD205_250116, 0960_SD305_250116,	0960_SD207_250116, 0960_SD009_250116	16-Jan-2025	23-Jan-2025	15-Jul-2025	✓	23-Jan-2025	04-Mar-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P)		0960_MW181A_250116, 0960_OTH106_250116, 0960_SW205_250116, 0960_SW301_250116,	16-Jan-2025	---	---	22-Jan-2025	30-Jan-2025	✔
0960_MW180A_250116,								
0960_MW140A_250116,								
0960_OTH107_250116,								
0960_SW207_250116,								
0960_SW305_250116								
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)		0960_MW181A_250116, 0960_OTH106_250116, 0960_SW205_250116, 0960_SW301_250116,	16-Jan-2025	---	---	28-Jan-2025	13-Feb-2025	✔
0960_MW180A_250116,								
0960_MW140A_250116,								
0960_OTH107_250116,								
0960_SW207_250116,								
0960_SW305_250116								
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)		0960_MW181A_250116, 0960_OTH106_250116, 0960_SW205_250116, 0960_SW301_250116,	16-Jan-2025	---	---	28-Jan-2025	13-Feb-2025	✔
0960_MW180A_250116,								
0960_MW140A_250116,								
0960_OTH107_250116,								
0960_SW207_250116,								
0960_SW305_250116								



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	
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural (ED093F) 0960_MW180A_250116, 0960_MW140A_250116, 0960_OTH107_250116, 0960_SW207_250116, 0960_SW305_250116	0960_MW181A_250116, 0960_OTH106_250116, 0960_SW205_250116, 0960_SW301_250116,	16-Jan-2025	----	----	----	21-Jan-2025	23-Jan-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_MW180A_250116, 0960_MW140A_250116, 0960_SW207_250116, 0960_SW305_250116, 0960_QC116_250116,	0960_MW181A_250116, 0960_SW205_250116, 0960_SW301_250116, 0960_QC115_250116, 0960_QC117_250116	16-Jan-2025	21-Jan-2025	15-Jul-2025	✓	21-Jan-2025	15-Jul-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_OTH106_250116, 0960_QC410_250116,	0960_OTH107_250116, 0960_QC310_250116	16-Jan-2025	22-Jan-2025	15-Jul-2025	✓	22-Jan-2025	15-Jul-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_QC507_250116		17-Jan-2025	22-Jan-2025	16-Jul-2025	✓	22-Jan-2025	16-Jul-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0960_MW180A_250116, 0960_MW140A_250116, 0960_SW207_250116, 0960_SW305_250116, 0960_QC116_250116,	0960_MW181A_250116, 0960_SW205_250116, 0960_SW301_250116, 0960_QC115_250116, 0960_QC117_250116	16-Jan-2025	21-Jan-2025	15-Jul-2025	✓	21-Jan-2025	15-Jul-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_OTH106_250116, 0960_QC410_250116,	0960_OTH107_250116, 0960_QC310_250116	16-Jan-2025	22-Jan-2025	15-Jul-2025	✓	22-Jan-2025	15-Jul-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_QC507_250116		17-Jan-2025	22-Jan-2025	16-Jul-2025	✓	22-Jan-2025	16-Jul-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0960_MW180A_250116, 0960_MW140A_250116, 0960_SW207_250116, 0960_SW305_250116, 0960_QC116_250116,	0960_MW181A_250116, 0960_SW205_250116, 0960_SW301_250116, 0960_QC115_250116, 0960_QC117_250116	16-Jan-2025	21-Jan-2025	15-Jul-2025	✓	21-Jan-2025	15-Jul-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_OTH106_250116, 0960_QC410_250116,	0960_OTH107_250116, 0960_QC310_250116	16-Jan-2025	22-Jan-2025	15-Jul-2025	✓	22-Jan-2025	15-Jul-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_QC507_250116		17-Jan-2025	22-Jan-2025	16-Jul-2025	✓	22-Jan-2025	16-Jul-2025	✓



Matrix: **WATER** Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_MW180A_250116, 0960_MW140A_250116, 0960_SW207_250116, 0960_SW305_250116, 0960_QC116_250116,	0960_MW181A_250116, 0960_SW205_250116, 0960_SW301_250116, 0960_QC115_250116, 0960_QC117_250116	16-Jan-2025	21-Jan-2025	15-Jul-2025	✔	21-Jan-2025	15-Jul-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH106_250116, 0960_QC410_250116,	0960_OTH107_250116, 0960_QC310_250116	16-Jan-2025	22-Jan-2025	15-Jul-2025	✔	22-Jan-2025	15-Jul-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC507_250116		17-Jan-2025	22-Jan-2025	16-Jul-2025	✔	22-Jan-2025	16-Jul-2025	✔
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0960_MW180A_250116, 0960_MW140A_250116, 0960_SW207_250116, 0960_SW305_250116, 0960_QC116_250116,	0960_MW181A_250116, 0960_SW205_250116, 0960_SW301_250116, 0960_QC115_250116, 0960_QC117_250116	16-Jan-2025	21-Jan-2025	15-Jul-2025	✔	21-Jan-2025	15-Jul-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH106_250116, 0960_QC410_250116,	0960_OTH107_250116, 0960_QC310_250116	16-Jan-2025	22-Jan-2025	15-Jul-2025	✔	22-Jan-2025	15-Jul-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_QC507_250116		17-Jan-2025	22-Jan-2025	16-Jul-2025	✔	22-Jan-2025	16-Jul-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	1	4	25.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	4	39	10.26	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	18	11.11	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	14	21.43	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	20	5.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	4	40	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	4	39	10.26	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	14	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	4	40	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Alkalinity by Auto Titrator	ED037-P	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	39	5.13	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	14	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	40	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	2	39	5.13	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	14	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	
Matrix Spikes (MS) - Continued							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by 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.
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
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.



<i>Analytical Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	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 concentrated, combined with an equal volume of reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
QuEChERS Extraction of Solids	* ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
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.



QUALITY CONTROL REPORT

Work Order : EP2500743

Page : 1 of 19

Client : GHD PTY LTD

Laboratory : Environmental Division Perth

Contact : [REDACTED]

Contact : [REDACTED]

Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000

Address : 26 Rigali Way Wangara WA Australia 6065

Telephone : ----

Telephone : +61-8-9406 1301

Project : 12641234 - PFAS OMP

Date Samples Received : 20-Jan-2025

Order number : 12641234

Date Analysis Commenced : 21-Jan-2025

C-O-C number : 77903

Issue Date : 29-Jan-2025

Sampler : [REDACTED]

Site : 0960 RAAF Learmonth

Quote number : EP24GHDSE0016_V5

No. of samples received : 19

No. of samples analysed : 19



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]	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
[REDACTED]	Organic Supervisor	Perth Organics, Wangara, WA



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**

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: 6323618)									
EP2500743-140	0960_SD205_250116	EA055: Moisture Content	----	0.1	%	25.0	25.1	0.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6326077)									
EP2500743-140	0960_SD205_250116	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6326077)									
EP2500743-140	0960_SD205_250116	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



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: 6326077) - continued									
EP2500743-140	0960_SD205_250116	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6326077)									
EP2500743-140	0960_SD205_250116	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: 6326077)									
EP2500743-140	0960_SD205_250116	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
EP231P: PFAS Sums (QC Lot: 6326077)									
EP2500743-140	0960_SD205_250116	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	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 (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6324591)									
EP2500742-064	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	172	171	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	172	171	0.0	0% - 20%
EP2500639-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	580	579	0.0	0% - 20%



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6324591) - continued									
EP2500639-002	Anonymous	ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	580	579	0.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6328159)									
EP2500729 002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808 79 8	1	mg/L	661	659	0.3	0% - 20%
EP2500729-011	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	6880	7230	5.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6328174)									
EP2500743-093	0960_SW205_250116	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	3470	3430	1.0	0% - 20%
EP2500777-064	Anonymous	ED041G Sulfate as SO4 Turbidimetric	14808-79-8	1	mg/L	2780	2800	0.8	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6328160)									
EP2500729-002	Anonymous	ED045G: Chloride	16887-00-6	1 (10)*	mg/L	90700	74900	19.1	0% - 20%
EP2500729 011	Anonymous	ED045G: Chloride	16887 00 6	1	mg/L	7330	7440	1.4	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 6328175)									
EP2500743-093	0960_SW205_250116	ED045G: Chloride	16887-00-6	1	mg/L	24300	24400	0.3	0% - 20%
EP2500777-064	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	18200	18100	0.4	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6323542)									
EP2500742-032	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	119	139	15.1	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	502	491	2.1	0% - 20%
		ED093F: Sodium	7440 23 5	1	mg/L	4820	4700	2.3	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	252	246	2.0	0% - 20%
EP2500743-094	0960_SW207_250116	ED093F: Calcium	7440-70-2	1	mg/L	516	521	0.9	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	1700	1730	1.5	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	12800	12900	1.2	0% - 20%
		ED093F: Potassium	7440 09 7	1	mg/L	714	726	1.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6325019)									
EP2500743-026	0960_MW181A_250116	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6325042)									
EP2500743-094	0960_SW207_250116	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763 23 1	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit



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: 6325042) - continued									
EP2500743-094	0960_SW207_250116	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP2500777-055	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6326111)							
EP2500742 062	Anonymous	EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763 23 1	0 0002	µg/L	0 0002	0 0002	0 0	No Limit
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335 77 3	0 0005	µg/L	0 0005	0 0005	0 0	No Limit
		EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6325019)									
EP2500743-026	0960_MW181A_250116	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

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: 6325042)									
EP2500743-094	0960_SW207_250116	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
EP2500777-055	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
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6326111)									
EP2500742-062	Anonymous	EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
		EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6325019)							

EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6326111)

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: 6326111) - continued									
EP2500742-062	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6325019)									
EP2500743-026	0960_MW181A_250116	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6325042)									
EP2500743-094	0960_SW207_250116	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
EP2500777-055	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6326111)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6326111) - continued									
EP2500742-062	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6325019)									
EP2500743-026	0960_MW181A_250116	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
EP231P: PFAS Sums (QC Lot: 6325042)									
EP2500743-094	0960_SW207_250116	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
EP2500777-055	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
EP231P: PFAS Sums (QC Lot: 6326111)									
EP2500742-062	Anonymous	EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Sum of PFAS	----	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
	Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
		LCS	Low	High
Result				
<0.0002	0.0011 mg/kg	104	72.0	128
<0.0002	0.00125 mg/kg	102	73.0	123
<0.0002	0.00118 mg/kg	100	67.0	130
<0.0002	0.00119 mg/kg	99.2	70.0	132
<0.0002	0.00116 mg/kg	104	68.0	136
<0.0002	0.0012 mg/kg	107	70.0	130
<0.0002	0.0012 mg/kg	96.2	59.0	134
<0.001	0.00625 mg/kg	94.5	71.0	135
<0.0002	0.00125 mg/kg	97.6	69.0	132
<0.0002	0.00125 mg/kg	108	70.0	132
<0.0002	0.00125 mg/kg	91.2	71.0	131
<0.0002	0.00125 mg/kg	96.8	69.0	133
<0.0002	0.00125 mg/kg	100	72.0	129
<0.0002	0.00125 mg/kg	88.0	69.0	133
<0.0002	0.00125 mg/kg	109	64.0	136
<0.0002	0.00125 mg/kg	89.6	69.0	135
<0.0002	0.00125 mg/kg	102	66.0	139
<0.0005	0.00125 mg/kg	100	69.0	133
<0.0002	0.00125 mg/kg	123	67.0	137
<0.0005	0.00312 mg/kg	132	59.6	143
<0.0005	0.00312 mg/kg	88.5	62.8	140
<0.0005	0.00312 mg/kg	99.5	61.5	139
<0.0005	0.00312 mg/kg	118	61.9	139
<0.0002	0.00125 mg/kg	95.6	63.0	144
<0.0002	0.00125 mg/kg	90.4	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6326077) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	97.4	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	105	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	122	54.8	124
EP231P: PFAS Sums (QCLot: 6326077)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED037P: Alkalinity by PC Titrator (QCLot: 6324591)								
ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-00 1	1	mg/L	<1	----	----	----	----
ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----
ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	20 mg/L 200 mg/L	100 103	85.1 90.5	126 111
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6328159)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L 500 mg/L	104 92.0	89.9 89.9	112 112
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6328174)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L 500 mg/L	99.9 98.7	89.9 89.9	112 112
ED045G: Chloride by Discrete Analyser (QCLot: 6328160)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L 1000 mg/L	98.9 97.9	88.6 88.6	113 113
ED045G: Chloride by Discrete Analyser (QCLot: 6328175)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L 1000 mg/L	97.8 97.2	88.6 88.6	113 113
ED093F: Dissolved Major Cations (QCLot: 6323542)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	98.2	86.5	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	93.4	88.4	110
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	95.9	91.4	113



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
ED093F: Dissolved Major Cations (QCLot: 6323542) - continued								
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	93.1	84.6	108
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6325019)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	108	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	111	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	101	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	103	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	110	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	104	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6325042)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
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	111	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	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	101	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	111	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	103	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6326111)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	107	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	106	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	107	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	101	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	107	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	111	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	115	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6325019)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	110	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	101	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	115	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	92.8	69.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
				LCS		Low	High	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6325019) - continued								
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	114	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	125	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	119	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	130	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	110	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6325042)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	114	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	98.8	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	104	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	93.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	108	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	100	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	0.25 µg/L	94.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6326111)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	97.0	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	106	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	98.4	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	97.2	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	100	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	109	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	129	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	111	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	110	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	92.8	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	119	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6325019)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	128	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	122	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	103	60.5	138



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
CAS Number	LOR	Unit					Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6325019) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	108	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	127	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	116	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	104	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6325042)								
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	79.1	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	105	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	110	62.2	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	107	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6326111)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	130	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	123	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	105	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	104	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	109	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	109	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	109	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6325019)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	112	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	115	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	134	67.0	138



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6325019) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.241 µg/L	117	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6325042)								
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	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	122	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: 6326111)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	108	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	110	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	108	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	118	53.1	133
EP231P: PFAS Sums (QCLot: 6325019)								
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: 6325042)								
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**

				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number			Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6326077)							
EP2500743-141	0960_SD207_250116	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	108	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	106	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	104	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	98.7	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	105	70.0	130



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6326077) - continued							
EP2500743-141	0960_SD207_250116	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	94.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6326077)							
EP2500743-141	0960_SD207_250116	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	91.1	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	96.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	113	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	88.4	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	117	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	95.7	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	107	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	98.7	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	98.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	103	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6326077)							
EP2500743-141	0960_SD207_250116	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	126	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	127	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	90.9	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	99.3	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	118	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	108	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	93.2	61.0	139
		EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6326077)					
EP2500743-141	0960_SD207_250116	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.8	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	114	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	96.2	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	123	60.0	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
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6328159)							
EP2500729-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	# Not Determined	70.4	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6328174)							
EP2500722-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	124	70.4	130
ED045G: Chloride by Discrete Analyser (QCLot: 6328160)							
EP2500729-001	Anonymous	ED045G: Chloride	16887-00-6	200 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6328175)							
EP2500722-001	Anonymous	ED045G: Chloride	16887-00-6	200 mg/L	109	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6325042)							
EP2500777-019	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	107	72.0	129
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.232 µg/L	115	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	104	68.0	129
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	104	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	95.6	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.24 µg/L	107	70.0	135
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	98.4	53.0	129
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6326111)							
EP2500742-062	Anonymous	EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00367 µg/L	77.5	70.0	130
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00355 µg/L	102	70.0	130
		EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00376 µg/L	106	70.0	130
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00379 µg/L	97.2	70.0	130
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00381 µg/L	101	70.0	130
		EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00371 µg/L	109	70.0	130
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00385 µg/L	71.1	70.0	130
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6325042)							
EP2500777-019	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	108	73.0	142
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	97.5	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	104	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	104	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	101	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	103	71.0	134
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	108	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	95.9	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	120	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.25 µg/L	89.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6326111)							
EP2500742-062	Anonymous	EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.02 µg/L	86.4	70.0	130
		EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.004 µg/L	119	70.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6326111) - continued							
EP2500742-062	Anonymous	EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.004 µg/L	96.0	70.0	130
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.004 µg/L	85.6	70.0	130
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.004 µg/L	97.7	70.0	130
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.004 µg/L	101	70.0	130
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.004 µg/L	90.6	70.0	130
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.004 µg/L	104	70.0	130
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.004 µg/L	86.8	70.0	130
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.004 µg/L	79.2	70.0	130
		EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.004 µg/L	102	70.0	130
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6325042)							
EP2500777-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	104	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	89.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	97.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	106	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	112	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	98.5	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	104	61.0	135
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6326111)					
EP2500742-062	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.004 µg/L	109	70.0	130
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.01 µg/L	107	70.0	130
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.01 µg/L	105	70.0	130
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.01 µg/L	90.3	70.0	130
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.01 µg/L	102	70.0	130
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.004 µg/L	94.3	70.0	130
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.004 µg/L	89.1	70.0	130
		EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6325042)					
EP2500777-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	106	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	109	64.0	140

Page : 19 of 19
 Work Order : EP2500743
 Client : GHD PTY LTD
 Project : 12641234 - PFAS OMP



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6325042) - continued							
EP2500777-019	Anonymous	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	124	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	116	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6326111)							
EP2500742-062	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00374 µg/L	98.3	70.0	130
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0038 µg/L	97.7	70.0	130
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00384 µg/L	90.3	70.0	130
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00386 µg/L	83.7	70.0	130

Appendix F

Field notes



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW001
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 Wapet creek	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 12:17

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: low to moderate
Comment: Wapet creek, shells / flat marsh / channel			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other: ☐			
Collection point: East bank (20m before mangrove)		Equipment used: YSI	
Dimensions of water body	Shape: irregular	Width: 5 m	Length: 100 ⁺ m
Depth: 0.3 m			

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.2	38.7	110.5	5.76	65635	42676	8.14	-44.4

Comments (e.g., sheen, colour, odour, sediment load):	Colourless, low turbidity, no sheen, no odour, low sediment load, within vitigial tyre tracks shells, OM, crab.
---	---

SAMPLING DETAILS

Sample ID: 0960-SW001-241215	Duplicate (QC) samples taken Y 1 (N)	Duplicate (QC) sample IDs: —	
Time: 12:17	Volume removed: 0.4	Number of sample containers: 3	Field Filtered Y 1 (N)
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic: 3	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW108
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 1:08

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:			



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW113
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 11:11

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY
No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW114
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 18:11:11

SURFACE WATER DETAILS							
Natural ☐		Man-made: ☐		Unknown: ☐		Flow rate:	
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body		Shape:		Width: m		Length: m	
						Depth: m	
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
DRY							
No sample							
SAMPLING DETAILS							
Sample ID:		Duplicate (QC) samples taken Y / N		Duplicate (QC) sample IDs:			
Time:		Volume removed:		Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: 0960-SW121
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: Learmonth	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:30

SURFACE WATER DETAILS							
Natural ☐		Man-made: ☐		Unknown: ☐		Flow rate:	
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body		Shape:		Width: m		Length: m	
				Depth: m			
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
SAMPLING DETAILS							
Sample ID:		Duplicate (QC) samples taken Y / N		Duplicate (QC) sample IDs:			
Time:		Volume removed:		Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW122
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: Leamington	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:37

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

NO Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
			Unpreserved Glass:
			Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW123
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: Learmonth.	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:08

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width: m	Length: m	Depth: m			
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
No sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW124
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 inside	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:40

SURFACE WATER DETAILS							
Natural ☐		Man-made: ☐		Unknown: ☐		Flow rate:	
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body		Shape:	Width: m	Length: m	Depth: m		
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
				DPM			
Comments (e.g., sheen, colour, odour, sediment load):							
No sample							
SAMPLING DETAILS							
Sample ID:		Duplicate (QC) samples taken Y / N		Duplicate (QC) sample IDs:			
Time:		Volume removed:		Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW 125
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:57

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
			Unpreserved Glass:
			Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW129
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 1:41

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width: m	Length: m	Depth: m			
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
DRY							
No Sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence

Sample ID: SW157

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: 0960 airside

Date: 11/12/24

Undertaken by: [REDACTED]

Time: 10:57

SURFACE WATER DETAILS

Natural ☐Man-made: ☐Unknown: ☐

Flow rate:

Comment:

Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:

Collection point:

Equipment used:

Dimensions of water body

Shape:

Width:

m

Length:

m

Depth:

m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

SAMPLING DETAILS

Sample ID:

Duplicate (QC) samples taken Y / N

Duplicate (QC) sample IDs:

Time:

Volume removed:

Number of sample containers:

Field Filtered Y / N

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic:

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW166
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 airside	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:41

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width: m	Length: m	Depth: m			
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2°C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
[Handwritten: No Sample]							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW168
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 airside	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:30

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRU

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:			



Surface Water – Field Sheet

Client: Department of Defence

Sample ID: SW170

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: 0960

Date: 11/12/24

Undertaken by: [REDACTED]

Time: 12:21

SURFACE WATER DETAILS

Natural ☐Man-made: ☐Unknown: ☐

Flow rate:

Comment:

Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:

Collection point:

Equipment used:

Dimensions of water body

Shape:

Width: m

Length: m

Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY

No sample

SAMPLING DETAILS

Sample ID:

Duplicate (QC) samples taken Y / N

Duplicate (QC) sample IDs:

Time:

Volume removed:

Number of sample containers:

Field Filtered Y / N

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic:

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW174
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 xioside	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:28

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence

Sample ID: SW176

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: 0960

airside

Date: 11/12/24

Undertaken by: [REDACTED]

Time: 10:00

SURFACE WATER DETAILS

Natural ☐Man-made: ☐Unknown: ☐

Flow rate:

Comment:

Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:

Collection point:

Equipment used:

Dimensions of water body

Shape:

Width: m

Length: m

Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DPH
No Sample

SAMPLING DETAILS

Sample ID:

Duplicate (QC) samples taken Y / N

Duplicate (QC) sample IDs:

Time:

Volume removed:

Number of sample containers:

Field Filtered Y / N

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic:

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW189
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 5:05

SURFACE WATER DETAILS							
Natural ☒	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment: <i>100% DRY, no surface water, no sample</i>							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width:	m	Length:	m	Depth:	m
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence

Sample ID: SW190

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: Offsite, Learmonth

Date: 10/12/24

Undertaken by: [REDACTED]

Time: 3:15

SURFACE WATER DETAILS

Natural ☐Man-made: ☐Unknown: ☐

Flow rate:

Comment:

Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:

Collection point:

Equipment used:

Dimensions of water body

Shape:

Width: m

Length: m

Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DR-1

No Sample

SAMPLING DETAILS

Sample ID:

Duplicate (QC) samples taken Y / N

Duplicate (QC) sample IDs:

Time:

Volume removed:

Number of sample containers:

Field Filtered Y / N

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic:

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW192
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - offsite beach	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 9:38

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW193
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - offsite beach	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 9:42

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width: m	Length: m	Depth: m			
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
				DR-1			
Comments (e.g., sheen, colour, odour, sediment load): No Sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW198 SW198
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: SW198	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:43

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate:
Comment: DRY - no surface water present, no sample			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW199
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 12/12/24
Undertaken by: [REDACTED]	Time: 4:09

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width:	m	Length:	m	Depth:	m
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
No Sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW200
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 12/12/24
Undertaken by: [REDACTED]	Time: 3:59

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



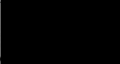
Surface Water – Field Sheet

Client: Department of Defence

Sample ID: *0960-SW205-250116*

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: *hearmouth*Date: *16 JAN 25*Undertaken by: Time: *08:25*

SURFACE WATER DETAILS

Natural ☒Man-made: ☐Unknown: ☐Flow rate: *NO FLOW*Comment: *Small puddle in mangrove wetland*Type of water body: River ☐ Creek ☐ Stream ☒ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other: *Wetland/mangrove*Collection point: *Surface water*

Equipment used:

Dimensions of water body

Shape: *circular*Width: *0.1* mLength: *0.1* mDepth: *0.05* m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
	<i>26.8</i>	<i>32.5 / 40.0</i>	<i>1.76</i>	<i>70902</i>	<i>46094</i>	<i>7.65</i>	<i>76.3</i>

Comments (e.g., sheen, colour, odour, sediment load):

Clear, faint/pale grey, brown, organic - sour/rotten smell

SAMPLING DETAILS

Sample ID: *SW205*Duplicate (QC) samples taken Y / *N*Duplicate (QC) sample IDs: *—*Time: *0825*Volume removed: *290ml*Number of sample containers: *3*Field Filtered Y / *N*

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic: *3*

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

0960-SW207-25016

Client: Department of Defence	Sample ID: SW207
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: <i>Wearmouth</i>	Date: <i>16 JAN 25</i>
Undertaken by: [REDACTED]	Time: <i>0835</i>

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: <i>0/NO FLOW</i>
Comment: <i>Inlet / Mangrove system (low tide)</i>			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: <i>Small puddle</i>		Equipment used:	
Dimensions of water body	Shape: <i>Circular</i>	Width: <i>0.1</i> m	Length: <i>0.1</i> m
Depth: <i>0.1</i> m			

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
<i>0.1</i>	<i>27.2</i>	<i>34.2</i>	<i>2.00</i>	<i>59618</i>	<i>38755</i>	<i>7.87</i>	<i>91.2</i>

Comments (e.g., sheen, colour, odour, sediment load):

Grey-brown + med-low red load, highly organic & "sour" smell & smell is also "yeasty"

SAMPLING DETAILS

Sample ID: SW207	Duplicate (QC) samples taken <i>Y</i> N	Duplicate (QC) sample IDs: <i>Lab dup. + matrix spike</i>
Time: <i>0835</i>	Volume removed: <i>290ml</i>	Number of sample containers: <i>3</i>
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:
	Preserved Glass:	Unpreserved Glass:
	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW208
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - WAPET CREEK	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 8:17

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: low - moderate
Comment: estuary of WAPET CREEK			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: edge of meander, close to beach		Equipment used: YSI, surface water pole	
Dimensions of water body	Shape: meandering	Width: 5 m	Length: 20 m
Depth: ~1 m			

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.5	28.4	71.8	4.52	56900	36985	7.82	-89.7

Comments (e.g., sheen, colour, odour, sediment load):

low to moderate turbidity, pale green, no sheen, no odour, low sediment load.

SAMPLING DETAILS

Sample ID: 0960-SW208-241215	Duplicate (QC) samples taken: Y / (N)	Duplicate (QC) sample IDs: -
Time:	Volume removed: 0.4	Number of sample containers: 3
Type and number of sample containers:	Field Filtered: Y / (N)	PUT
Preserved Plastic: 3	Unpreserved Plastic:	Preserved Glass:
Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW209 SW209
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: SW209 0960 - wapet creek	Date: 16/12/24
Undertaken by: [REDACTED]	Time: 12:27

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: Low
Comment: Mangrove banks, wapet creek			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: West boundary - mangrove banks		Equipment used: YSi	
Dimensions of water body	Shape: Irregular	Width: — m	Length: — m
			Depth: 0.2 m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.2	31.8	95.0	5.56	60278	39150	7.87	-47.0

Comments (e.g., sheen, colour, odour, sediment load): very pale yellow/green, no odour, no sheen, slight bacterial sheen, low turbidity, low sediment load, low flow

SAMPLING DETAILS

Sample ID: 0960-SW209-24/12/16	Duplicate (QC) samples taken Y / (N)	Duplicate (QC) sample IDs: —	
Time: 12:27	Volume removed: 375 mL	Number of sample containers: 3	Field Filtered Y / (N)
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic: 3	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW210
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - offsite	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:52

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width:	m	Length:	m	Depth:	m
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
No Sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW211
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - Wapet creek	Date: 16/12/24
Undertaken by: [REDACTED]	Time: 2:36

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: Low
Comment: Mangrove marsh, North most of Wapet creek.			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: edge of creek, mangrove marsh		Equipment used: YSI	
Dimensions of water body	Shape: irregular	Width: — m	Length: — m
			Depth: 0.5 m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2°C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.5	35.5	111.3	5.48	87350	56777	7.85	-55.5

Comments (e.g., sheen, colour, odour, sediment load):

light brown, moderately turbid, no odour,
the sheer slight bacterial, on (rooted plants)
low sediment load.

SAMPLING DETAILS

Sample ID: 0960-SW211-241216	Duplicate (QC) samples taken Y 1 (N)	Duplicate (QC) sample IDs: —
Time: 2:36	Volume removed: 0.4	Number of sample containers: 3
		Field Filtered Y 1 (N)
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic: 3
	Preserved Glass:	Unpreserved Glass:
	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW227
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 airside	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:39

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

No sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW231
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 11:32

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2°C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DPH

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW 234
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 10:20

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence

Sample ID: SW 235

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: 2960

Date: 10/12/24

Undertaken by: [REDACTED]

Time: 2:14

SURFACE WATER DETAILS

Natural ☐Man-made: ☐Unknown: ☐

Flow rate:

Comment:

Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:

Collection point:

Equipment used:

Dimensions of water body

Shape:

Width: m

Length: m

Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY

No sample

SAMPLING DETAILS

Sample ID:

Duplicate (QC) samples taken Y / N

Duplicate (QC) sample IDs:

Time:

Volume removed:

Number of sample containers:

Field Filtered Y / N

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic:

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW243
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 a/c side	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:14

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW265
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 12:45

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:			



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW277
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:00

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width: m	Length: m	Depth: m			
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2°C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
No Sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N		Duplicate (QC) sample IDs:				
Time:	Volume removed:		Number of sample containers:			Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW278
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:50

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:			



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW 279
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 airside	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:23

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width:	m	Length:	m	Depth:	m
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:							



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW288
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: offsite learmouth	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 3:40

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers: Preserved Plastic: Unpreserved Plastic: Preserved Glass: Unpreserved Glass: Preserved Vial: Unpreserved Vial:			



Surface Water – Field Sheet

Client: Department of Defence

Sample ID: SW291

Project: Defence PFASIM LC WA

Project Number: 12641234

Location: 0960 - offsite

Date: 14/12/24

Undertaken by: [REDACTED]

Time: 4:19

SURFACE WATER DETAILS

Natural ☐Man-made: ☐Unknown: ☐

Flow rate:

Comment:

Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:

Collection point:

Equipment used:

Dimensions of water body

Shape:

Width: m

Length: m

Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2°C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

SAMPLING DETAILS

Sample ID:

Duplicate (QC) samples taken Y / N

Duplicate (QC) sample IDs:

Time:

Volume removed:

Number of sample containers:

Field Filtered Y / N

Type and number of sample containers:

Preserved Plastic:

Unpreserved Plastic:

Preserved Glass:

Unpreserved Glass:

Preserved Vial:

Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW292
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - Office	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:29

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DRY

No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW293
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 offsite	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:35

SURFACE WATER DETAILS							
Natural ☐	Man-made: ☐		Unknown: ☐		Flow rate:		
Comment:							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:							
Collection point:				Equipment used:			
Dimensions of water body	Shape:	Width:	m	Length:	m	Depth:	m
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
Comments (e.g., sheen, colour, odour, sediment load):							
No Sample							
SAMPLING DETAILS							
Sample ID:	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs:			
Time:	Volume removed:			Number of sample containers:		Field Filtered Y / N	
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:	



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW298
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - offsite	Date: 17/12/24
Undertaken by: [REDACTED]	Time: 11:23

SURFACE WATER DETAILS

Natural ☐	Man-made: ☐	Unknown: ☐	Flow rate:
Comment:			
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point:		Equipment used:	
Dimensions of water body	Shape:	Width: m	Length: m
			Depth: m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV

Comments (e.g., sheen, colour, odour, sediment load):

DPW
No Sample

SAMPLING DETAILS

Sample ID:	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs:	
Time:	Volume removed:	Number of sample containers:	Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW300
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - Wapet Creek	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 12:31

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: low
Comment: within mangrove bank Wapet creek.			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: mangrove marsh		Equipment used: YSI	
Dimensions of water body	Shape: irregular	Width: 20 m	Length: — m
			Depth: 0.5 m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.5	37.4	80.5	3.92	78800	51308	6.90	-24.1

Comments (e.g., sheen, colour, odour, sediment load):	colourless low turbidity, no odour, no sheen, organic matter (leaves bugs / fish)
---	---

SAMPLING DETAILS

Sample ID: 0960-SW300-241214	Duplicate (QC) samples taken: Y N	Duplicate (QC) sample IDs: 0960-QC112-241215 0960-QC212-241215		lab dups taken
Time: 12:31	Volume removed: 0.4	Number of sample containers: 9	Field Filtered: Y N	
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic:	Preserved Glass:	Unpreserved Glass:
			Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW301
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: Learmonth	Date: 16 JAN 25
Undertaken by: [REDACTED]	Time: 0910

SURFACE WATER DETAILS							
Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate:				
Comment: Wetland / Inlet / Clay pan							
Type of water body: River ☐ Creek ☐ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other: Wetland							
Collection point: Surface puddle				Equipment used:			
Dimensions of water body		Shape: Circular	Width: 0.1 m	Length: 0.1 m	Depth: 0.1 m		
WATER PARAMETERS							
Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.1	29.6	11.1	0.78	73107	47530	8.08	86.5
Comments (e.g., sheen, colour, odour, sediment load):							
Pale yellow - brown, med sed load, organic & "sour" odour							
SAMPLING DETAILS							
Sample ID: 0760-SW301-250116	Duplicate (QC) samples taken Y / N			Duplicate (QC) sample IDs: —			
Time: 0910	Volume removed: 290 mL			Number of sample containers: 3		Field Filtered Y / N	
Type and number of sample containers:		Preserved Plastic:	Unpreserved Plastic: 3	Preserved Glass:	Unpreserved Glass:	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW302
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - Wapet Creek	Date: 16/12/24
Undertaken by: [REDACTED]	Time: 1:54

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: low
Comment: mangrove bank, western side creek, marshland			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other: ☐			
Collection point: western side creek		Equipment used:	
Dimensions of water body	Shape: irregular	Width: - m	Length: - m
			Depth: 0.1 m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.1	34.9	91.8	5.11	63153	41049	7.83	42.9

Comments (e.g., sheen, colour, odour, sediment load):	colourless, no odour, no sheen, low turbidity
	low sediment load
	crab burrows, fish, mangroves

SAMPLING DETAILS

Sample ID: 0960-SW302-24/12/16	Duplicate (QC) samples taken Y / N ☒	Duplicate (QC) sample IDs: -
Time: 1:54	Volume removed: 0.4	Number of sample containers: 3
		Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic: 3
	Preserved Glass:	Unpreserved Glass:
	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW303
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 - Wapet creek	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 9:34

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: LOW - moderate
Comment: Wapet Creek			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: East boundary, mangrove banks		Equipment used: Surface water pole, 45i	
Dimensions of water body	Shape: 1 regular	Width: 10 m	Length: 10 m
			Depth: 0.5 m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.5	28.2	25.8	1.63	53915	35034	7.62	-87.1

Comments (e.g., sheen, colour, odour, sediment load):

Pale yellow / green, slight bacterial sheen, no odour, slightly - moderately turbid

SAMPLING DETAILS

Sample ID: 0960-SW303-24/12/15	Duplicate (QC) samples taken Y / (N)	Duplicate (QC) sample IDs: —	
Time: 09:30	Volume removed: 0.4	Number of sample containers: 3	Field Filtered Y / (N)
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic: 3	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: SW304
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: 0960 Wapet Creek	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 9:04

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: no flow / stagnant
Comment: Wapet Creek.			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: within mangrove banks		Equipment used: Surface water pole, ysi	
Dimensions of water body	Shape: irregular	Width: 2 m	Length: 2 m
			Depth: 0.75 m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
0.5	28.8	34.1	2.24	60518	39347	7.79	-142.3

Comments (e.g., sheen, colour, odour, sediment load):	moderately turbid, pale yellow, stagnant
	some OM, bacterial sheen, no odour

SAMPLING DETAILS

Sample ID: 0960-SW304-241215	Duplicate (QC) samples taken Y / N	Duplicate (QC) sample IDs: —
Time: 9:04	Volume removed: 0.4	Number of sample containers: 3
		Field Filtered Y / N
Type and number of sample containers:	Preserved Plastic: 3	Unpreserved Plastic:
	Preserved Glass:	Unpreserved Glass:
	Preserved Vial:	Unpreserved Vial:



Surface Water – Field Sheet

Client: Department of Defence	Sample ID: <i>SW305</i>
Project: Defence PFASIM LC WA	Project Number: 12641234
Location: <i>Hearmonth</i>	Date: <i>16 JAN 25</i>
Undertaken by: [REDACTED]	Time: <i>1010</i>

SURFACE WATER DETAILS

Natural ☒	Man-made: ☐	Unknown: ☐	Flow rate: <i>2m/sec</i>
Comment: <i>Creek line leading from inland dry pans to coast</i>			
Type of water body: River ☐ Creek ☒ Stream ☐ Drain ☐ Culvert ☐ Dam ☐ Pond ☐ Other:			
Collection point: <i>Edge of water</i>		Equipment used: <i>—</i>	
Dimensions of water body	Shape: <i>Creek</i>	Width: <i>10</i> m	Length: <i>N/A</i> m
			Depth: <i>~2</i> m

WATER PARAMETERS

Sample Depth (m)	Temp. (°C)	DO %Sat	DO (ppm/mg/L)	SPC (µS/cm)	TDS (ppm/mg/L)	pH (pH units)	Eh (mV)
	±0.2 °C	±10%	±10%	±3%	±3%	±0.1 pH units	±10 mV
<i>0.1</i>	<i>29.5</i>	<i>9.5</i>	<i>0.56</i>	<i>59787</i>	<i>38866</i>	<i>7.85</i>	<i>101.1</i>

Comments (e.g., sheen, colour, odour, sediment load):

Clear, colourless, low sediment load, slightly organic & "seamy" smell

SAMPLING DETAILS

Sample ID: <i>280760-SW305-250116</i>	Duplicate (QC) samples taken Y / <i>(N)</i>	Duplicate (QC) sample IDs: <i>—</i>	
Time: <i>1010</i>	Volume removed: <i>290 mL</i>	Number of sample containers: <i>3</i>	Field Filtered Y / <i>(N)</i>
Type and number of sample containers:	Preserved Plastic:	Unpreserved Plastic: <i>3</i>	Preserved Glass:
		Unpreserved Glass:	Preserved Vial:
			Unpreserved Vial:

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD123 (1)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:08 AM
Depth: 0.1	
Material Description: Silty SAND, red/brown, fine grained, loose, dry, in drainage channel. SR	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining.	
SAMPLING DETIALS	Sample ID: 0960-SD123-0.1-241210
Time: 8:21	No. of Sample containers: 3
Duplicate sample: ☒	Duplicate sample IDs: 0960-QC101-241210 0960-QC101-241210
Comments: SW was dry.	

Client: Department of Defence	Location ID: SD121 (2)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:30 AM
Depth: 0.1	
Material Description: Silty SAND, red-brown, fine grained, SR, loose, dry, in drainage channel	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/stain	
SAMPLING DETIALS	Sample ID: 0960-SD121-0.1-241210
Time: 8:30 AM	No. of Sample containers: 1
Duplicate sample: ☐	Duplicate sample IDs: —
Comments: SW was dry.	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD122 ③
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:35
Depth: 0.1	
Material Description: Silty SAND, red/brown, SR, fine grained, dry, loose, dehydrated sediment top layer, in drainage channel	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETAILS	Sample ID: 0960-SD122-0.1-241210
Time: 8:35	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: -
Comments: SW was dry	

Client: Department of Defence	Location ID: SD278 ④
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:50
Depth: 0.1	
Material Description: SAND, dark red/brown, SR, very fine, dry, loose, some on (grass) in drainage channel	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETAILS	Sample ID: 0960-SD278-0.1-241210
Time: 8:50	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: -
Comments: SW was dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD125 ⑤
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 8:57
Depth: 0.1	
Material Description: Silt, red/brown, fine, loose, dry, in depression, dehydrated	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining.	
SAMPLING DETAILS	Sample ID: 0960-SD125-0.1-241210
Time: 8:57	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: -
Comments: SW was dry	

Client: Department of Defence	Location ID: SD234 ⑥
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 10:21
Depth:	
Material Description: Silt, dehydrated, red/brown, fine, loose, dehydrated dry, some organics,	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining	
SAMPLING DETAILS	Sample ID: 0960-SD234-0.1-241210
Time: 10:21	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: -
Comments: SW was dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD113
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 11:11
Depth: 0.1	
Material Description: Silt, red/brown, fine, rocks, loose, dehydrated, organic material	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other Tractor observed driving as a track flood mitigation bridge. no odour / staining	
SAMPLING DETAILS	Sample ID: 0960-SD113-0.1-241210
Time: 11:11	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: —
Comments: passes under road SW was dry	

Client: Department of Defence	Location ID: SD114
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 11:11
Depth: 0.1	
Material Description: Sand, fine, red/brown, loose, dry, organic material	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other Tractor observed using as a track flood mitigation bridge, no odour / staining	
SAMPLING DETAILS	Sample ID: 0960-SD114-0.1-241210
Time: 11:11	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: —
Comments: passes under road SW was dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD231 (9)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 11:29
Depth: 0.1	
Material Description: SILT, red/brown, fine, SR, dehydrated surface layer, loose, dry within depression near road.	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETAILS	Sample ID: 0960-SD231-0.1-241210
Time: 11:37	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry	

Client: Department of Defence	Location ID: SD265 (10)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 12:45 PM
Depth: 0.1	
Material Description: gravelly SAND, pale red/brown, f-c, SR-SA, loose dry	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining.	
SAMPLING DETAILS	Sample ID: 0960-SD265-0.1-241210
Time: 12:45	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD219 ①
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 1:41
Depth: 0.1	
Material Description: SILT - red/brown, loose, dry, dehydrated, fine, some OM (grass) in dry creek bed.	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odours/staining,	
SAMPLING DETAILS	Sample ID: 0960-SD219-0.1-241210
Time: 1:41	No. of Sample containers: 3
Duplicate sample: ✓	Duplicate sample IDs: 0960-QC102-241210
Comments: SW dry	

Client: Department of Defence	Location ID: SD235 ①
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/
Undertaken by: [REDACTED]	Time: 2:05
Depth: 0.1	
Material Description: SILT - red/brown, fine, compacted, dehydrated, some organics and coral remnant	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odours/staining	
SAMPLING DETAILS	Sample ID: 0960-SD235-0.1-241210
Time: 2:00	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: 0
Comments: SW dry, in dry creek bed	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 65
	SD190
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 3:15
Depth: 0.1	
Material Description: Sandy SILT, red/brown, loose, fine, dry dehydrated, some OM, shell/cored remnants creek bed	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining	
SAMPLING DETIALS	Sample ID: 0960-SD190-0.1-241210
Time: 3:15	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW was dry	

Client: Department of Defence	Location ID: 61
	SD288
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 10/12/24
Undertaken by: [REDACTED]	Time: 3:40
Depth: 0.1	
Material Description: SAND, y red/brown surface layer, underneath yellow/brown, loose, OM (shells, coral), SR, F-M. in creek bed, dry	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining.	
SAMPLING DETIALS	Sample ID: 0960-SD288-0.1-241210
Time: 3:40	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW was dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD176 (15)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:00
Depth: 0.1	
Material Description: Silty SAND, red/brown, fine, loose, dehydrated part, SR, dry, trace on	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETIALS	Sample ID: 0960-SD176-0.1-241211
Time: 10:00	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry in drainage channel.	

Client: Department of Defence	Location ID: SD279 (16)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:16
Depth: 0.1	
Material Description: Silty SAND, red/brown, fine, dehydrated, loose, trace on, dry	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETIALS	Sample ID: 0960-SD279-0.1-241211
Time: 10:16	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry in drainage channel	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD168 (17)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:30
Depth: 0.1	
Material Description: Silty SAND, reddish , dry, dehydrated, brown/red OM (grass/wood), fine, loose,	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour/staining	
SAMPLING DETAILS	Sample ID: 0960-SD168-0.1-241211
Time: 10:30	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: tyre tracks observed. SW dry drainage channel.	

Client: Department of Defence	Location ID: SD166 (18)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:41
Depth: 0.1	
Material Description: Silty SAND, brown/red, SA-A, OM, very loose, dry, fine, coagulated trace cobbles (gravel). A-SA	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour/staining	
SAMPLING DETAILS	Sample ID: 0960-SD166-0.1-241211
Time: 10:41	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: tyre tracks observed SW dry, drain channel.	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 19
	SD157
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 10:58
Depth: 0.7	
Material Description: Silty SAND, brown/red, dry, dehydrated, medium large, fine	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining.	
SAMPLING DETAILS	Sample ID: 0960-SD157-0.1-241211
Time: 10:58	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: tyre tracks observed, near SW dry. North gate construction	

Client: Department of Defence	Location ID: 20
	SD243
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:14
Depth: 0.1	
Material Description: SAND, fine, loose, brown/red, dry, dehydrated, large coarse gravel, sub-angular, some organics (grass, roots)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no staining	
SAMPLING DETAILS	Sample ID: 0960-SD243-0.1-241211
Time: 11:14	No. of Sample containers: 3
Duplicate sample: ✓	Duplicate sample IDs: 0960-0C103-241211
Comments: Tyre tracks observed Drainage channel SW dry, dups taken drainage channel	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 26
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:28
Depth: 0.1	
Material Description: SAND, brown/red, ^{grass roots} some OM, fine, very loose, dry, slightly dehydrated, fine SA gravels,	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odours/staining	
SAMPLING DETAILS	Sample ID: 0960-SD174-0.1-241211
Time: 11:28	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dreg. tyre tracks observed adjacent to drain	

Client: Department of Defence	Location ID: 22
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:39
Depth: 0.1	
Material Description: SAND, fine, brown/red, loose, dry, minor subangular gravel, dehydrated, organics (grass, roots)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no staining	
SAMPLING DETAILS	Sample ID: 0960-SD ²⁷⁷ 174 -0.1-241211
Time: 11:39	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: - Tyre tracks observed - In drainage channel	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 23 SD170
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 11:40
Depth: 0.1	
Material Description: SAND, brown/red, fine, loose, dehydrated, OM (grass/sticks), dry, SA gravels (med-coarse)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odours/staining - metal wire observed SMF found nearby.	
SAMPLING DETAILS	Sample ID: 0960-SD170-0.1-241211
Time: 11:40	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry	

Client: Department of Defence	Location ID: 24 SD170
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 12:21
Depth: 0.1	
Material Description: SAND, red/brown, fine, loose, dehydrated, Coagulated, OM (grass/roots), dry, trace cobbles	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining	
SAMPLING DETAILS	Sample ID: 0960-SD170-0.1-241211
Time: 12:21	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: stormwater in drain, lots of vegetation SW dry steep banks	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 25 SD 200 108
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 11/12/24
Undertaken by: [REDACTED]	Time: 1:08
Depth: 0.1	
Material Description: SAND, dark red/brown, fine, dry, loose, OM (grass/roots), small amount of coagulating.	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour/staining	
SAMPLING DETAILS	Sample ID: 0960-SD ¹⁰⁸ 200 -0.1-241221
Time: 1:08	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: in creek bed, tyre tracks observed SW dry	

Client: Department of Defence	Location ID: 20 SD 200
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 12/12/24
Undertaken by: [REDACTED]	Time: 3:54 pm
Depth: 0.1	
Material Description: SAND, brown/red, dry, dehydrated, medium dense fine , coarse & gravel, coagulated. fine gravel/red	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour/staining	
SAMPLING DETAILS	Sample ID: 0960-SD 200-0.1-241212
Time: 3:54	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry, in creek bed.	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD199
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 12/12/24
Undertaken by: [REDACTED]	Time: 4:09
Depth: 0.1	
Material Description: SAND, brown/red, loose, dry, dehydrated, fine, OM (grass & bones), adjacent to quadrant drain	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odours/staining.	
SAMPLING DETAILS	Sample ID: 0960-SD199-0.1-241212
Time: 4:09	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry, vehicle crossing adjacent.	

Client: Department of Defence	Location ID: SD192
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 9:38
Depth: 0.1	
Material Description: gravelly SAND, cobbles throughout, pale yellow, coarse, some OM (shells, coral) loose, gravel/cobbles R-SR, slightly moist	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / no staining	
SAMPLING DETAILS	Sample ID: 0960-SD192-0.1-241214
Time: 9:38	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry, creek line, tyre tracks evident	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD193 ②
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 9:42
Depth: 0.1	
Material Description: <i>crimson mottled</i> gravelly SAND, cobbles present, pale yellow. Course, slightly wet , gravels/cobbles R-SR Some on (shells/coral) loose - moist.	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETIALS	Sample ID: 0960-SD193-0.1-241214
Time: 9:42	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry, creek line	

Client: Department of Defence	Location ID: SD227 ②
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:00
Depth: 0.1	
Material Description: SAND, red/brown, fine, loose, compacted, dry, some on (grass)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour / staining	
SAMPLING DETIALS	Sample ID: 0960-SD227-0.1-241214
Time: 4:00	No. of Sample containers: 3
Duplicate sample: ✓	Duplicate sample IDs: 0960-QC108-241214
Comments: SW dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 50291
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:19
Depth: 0.1	
Material Description: Brown/red, SAND, dry, loose, fine, coagulated, Some organic matter (leaves and sticks)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no seen	
SAMPLING DETIALS	Sample ID: 0960-50291-0.1-24/12/24
Time: 4:19	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: Underneath organic matter (leaves and sticks had to be cleared) SW dry	

Client: Department of Defence	Location ID: 50292
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:25
Depth: 0.1	
Material Description: SAND SAND: Brown/red, dry, loose, fine, organic matter (grass and sticks)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no seen	
SAMPLING DETIALS	Sample ID: 0960-50292-0.1-24/12/24
Time: 4:25	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: Underneath grass (grass had to be cleared) SW dry	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: <i>SD193</i> 33
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: <i>14/12/24</i>
Undertaken by: [REDACTED]	Time: <i>4:33</i>
Depth: <i>0.1</i>	
Material Description: <i>SAND: Brown/red, loose, fine, dry, organic matter</i>	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other <i>No odour / staining</i>	
SAMPLING DETAILS	Sample ID: <i>0960-SD193-0.1-241214</i>
Time: <i>4:33</i>	No. of Sample containers: <i>1</i>
Duplicate sample: <i>-</i>	Duplicate sample IDs: <i>-</i>
Comments: <i>creek line, SW dry</i>	

Client: Department of Defence	Location ID: <i>SD198</i> 34
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: <i>14/12/24</i>
Undertaken by: [REDACTED]	Time: <i>4:48</i>
Depth: <i>0.1</i>	
Material Description: <i>SAND, pale red/orange, fine, very loose, dry, some OM (shells, bones) SA</i>	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other <i>No odour / staining</i>	
SAMPLING DETAILS	Sample ID: <i>0960-SD198-0.1-241214</i>
Time: <i>4:48</i>	No. of Sample containers: <i>1</i>
Duplicate sample: <i>✓</i>	Duplicate sample IDs: <i>-</i>
Comments: <i>creek line SW dry</i>	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD210 ⁽³⁹⁾
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 4:53
Depth: 0.1	
Material Description: SILTY SAND: Brown/red with mottled black, moist, loose, fine,	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other Earthy odour	
SAMPLING DETAILS	Sample ID: 0960-SD210-0.1-241214
Time: 4:53	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: Crab burrows, adjacent wetland or creek	

Client: Department of Defence	Location ID: SD189 ⁽³⁹⁾
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 14/12/24
Undertaken by: [REDACTED]	Time: 5:05
Depth: 0.1	
Material Description: SAND: Orange, fine - medium grain, loose, dry, organic matter (roots, grass)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no staining	
SAMPLING DETAILS	Sample ID: 0960-SD189-0.1-241214
Time: 5:05	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: SW dry,	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 37 SD208
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 8:17
Depth: 0.1	
Material Description: SAND; Medium grain, grey, saturated, loose	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no stain	
SAMPLING DETAILS	Sample ID: 0960-SD208-0.1-241215
Time: 8:17	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: Water flowing, adjacent mangrove roots SW collected	

Client: Department of Defence	Location ID: 38 SD304
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 15/14
Undertaken by: [REDACTED]	Time: 9:14
Depth:	
Material Description: Silty, SAND, with coarse gravels, saturated, dark grey/brown, mottled black, loose, silt, shells present.	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour, staining	
SAMPLING DETAILS	Sample ID: 0960-SD208-0.1-241215
Time: 9:14	No. of Sample containers: 1
Duplicate sample:	Duplicate sample IDs: -
Comments: SW collected adjacent mangrove	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: <i>SD303</i> (30)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: <i>15/12/24</i>
Undertaken by: [REDACTED]	Time: <i>09:29</i>
Depth: <i>0.1</i>	
Material Description: <i>SAND: Fine-medium, saturated, slight black mottled grey/brown, subrounded</i>	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other <i>Slight organic odour</i>	
SAMPLING DETIALS	Sample ID: <i>0960-SD303-0.1-241215</i>
Time: <i>09:29</i>	No. of Sample containers: <i>1</i>
Duplicate sample: <i>-</i>	Duplicate sample IDs: <i>-</i>
Comments: <i>-</i>	

Client: Department of Defence	Location ID: <i>SD301</i> (40)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: <i>15/12/24</i>
Undertaken by: [REDACTED]	Time: <i>12:19</i>
Depth: <i>0.1</i>	
Material Description: <i>SILT: Fine, loose, saturated, orange/brown mottled black, shells</i>	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other <i>NO odour, no staining</i>	
SAMPLING DETIALS	Sample ID: <i>0960-SD301-0.1-241215</i>
Time:	No. of Sample containers: <i>3</i>
Duplicate sample: <i>✓</i>	Duplicate sample IDs: <i>0960-0C111-241215</i> <i>0960-0C211-241215</i>
Comments: <i>Vestigial tire tracks, crab burrows, 20m east of mangrove bank, SW collected</i>	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD300 (41)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 15/12/24
Undertaken by: [REDACTED]	Time: 12:31
Depth: 0.1	
Material Description: Silty sand, fine-coarse, brown mottled black, no staining, slight organic colour, saturated	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No staining, slight organic colour	
SAMPLING DETAILS	Sample ID: 0960-SD300-0.1-241215
Time: 12:31	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: Mangrove marsh	

Client: Department of Defence	Location ID: SD302 (42)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 16/12/24
Undertaken by: [REDACTED]	Time: 1:54
Depth: 0.1	
Material Description: SILTY SAND: Pale brown, mottled black, fine-medium grain, saturated, no odour, no staining, organic matter (shells)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No odour, no staining	
SAMPLING DETAILS	Sample ID: 0960-SD302-0.1-241216
Time: 1:54	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: Mangrove marsh, crab burrows	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: SD209 (45)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 16/12/24
Undertaken by: [REDACTED]	Time: 12:22
Depth: 0.1	
Material Description: Billy SAND, dark grey, brown on top, fine, loose, saturated, OM (corals/shells/fish)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odours/staining	
SAMPLING DETIALS	Sample ID: 0960-SD209-0.1-241216
Time: 12:22	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: mangrove bank western side Wapet creek SW taken.	

Client: Department of Defence	Location ID: SD211 (464)
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 16/12/24
Undertaken by: [REDACTED]	Time: 2:36
Depth: 0.1	
Material Description: SAND SANDY SILT: Pale brown/red-brown, fine, organic matter, roots, loose, saturated, mud	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other no odour/staining	
SAMPLING DETIALS	Sample ID: 0960-SD211-0.1-241216
Time: 2:36	No. of Sample containers: 1
Duplicate sample: -	Duplicate sample IDs: -
Comments: mangrove bank northern side of WAPET creek, SW taken.	

Sediment Sampling Field Sheet



Client: Department of Defence	Location ID: 45 SD298
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 17/12/24
Undertaken by: [REDACTED]	Time: 11:23
Depth: 0.1	
Material Description: SAND, brown/red, loose, fine, dry, dehydrated, coagulated, OM (grass)	
Field comments: Odours, staining, waste materials, separate phase liquids, ash, or other No Odour / staining	
SAMPLING DETAILS	Sample ID: 0960-SD298-0.1-241217
Time: 11:23	No. of Sample containers: 1
Duplicate sample: ☒	Duplicate sample IDs: -
Comments: SW dry	

Client: Department of Defence	Location ID: 46
Project: Defence PFASIM LC WA	Project No.: 12641234
Location: 0960	Date: 4
Undertaken by: [REDACTED]	Time: -
Depth:	
Material Description: fo	
Field comments: staining, waste materials, separate phase liquids, ash, or other	
SAMPLING DETAILS	Sample ID:
Time:	
Duplicate sample:	
Comments:	



Sediment Sampling Field Sheet

Client: 12641234 Defence	Location ID: SD205
Project: OMP	Project No.: 12641234
Property ID/Name: Leamouth	Date/Time: 16 JAN 25
Undertaken By: [REDACTED]	Weather:
SEDIMENT SAMPLING DETAILS	
Time: 0825	Sample Depth: 0.1 m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.): - Clay - Brown-orange - Medium (sludgy/soft due to moisture)	
Field Records/Comments	
- Mud / tidal plain - Mangrove vegetation	
SAMPLING DETAILS:	Sample ID: SD205 0960-SD205-250116
Time: 0825	No of Sample Containers: 1
Duplicate Samples ☒	Duplicate Sample ID
Comments:	



Surface Water & Sediment Field Sheet

Client:	Location ID:
Project:	Project No.:
Property ID/Name:	Date/Time:
Undertaken By:	Weather:
SEDIMENT SAMPLING DETAILS	
Time:	Sample Depth: m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.):	
Field Records/Comments	
SAMPLING DETAILS:	
Time:	No of Sample Containers:
Duplicate Samples ☐	Duplicate Sample ID
Comments:	



Sediment Sampling Field Sheet

Client: <i>Defence</i>	Location ID: <i>SD207</i>
Project: <i>OMP</i>	Project No.: <i>12641234</i>
Property ID/Name: <i>hearmouth</i>	Date/Time: <i>16 JAN 25</i>
Undertaken By: [REDACTED]	Weather: <i>cloudy</i>
SEDIMENT SAMPLING DETAILS	
Time: <i>0835</i>	Sample Depth: <i>0.1</i> m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.):	
- "yeasty" smell - Clay - Orange-brown - Soft / "sludgy"	
Field Records/Comments	
- Inlet / mangrove wetland - low tide - High density of mangrove vegetation - Many wetland insects present	
SAMPLING DETAILS:	Sample ID: <i>SD207 0960-SD207-250116</i>
Time: <i>0835</i>	No of Sample Containers: <i>1</i>
Duplicate Samples ☒	Duplicate Sample ID <i>X</i>
Comments:	



Surface Water & Sediment Field Sheet

Client:	Location ID:
Project:	Project No.:
Property ID/Name:	Date/Time:
Undertaken By:	Weather:
SEDIMENT SAMPLING DETAILS	
Time:	Sample Depth: m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.):	
Field Records/Comments	
SAMPLING DETAILS:	Sample ID:
Time:	No of Sample Containers:
Duplicate Samples ☐	Duplicate Sample ID
Comments:	



Sediment Sampling Field Sheet

Client: <i>Defence</i>	Location ID: <i>0760-SD009-250116</i>
Project: <i>OMP</i>	Project No.: <i>12041234</i>
Property ID/Name: <i>bearmant</i>	Date/Time: <i>16 JAN 25</i>
Undertaken By: [REDACTED]	Weather: <i>Cloudy</i>
SEDIMENT SAMPLING DETAILS	
Time: <i>0910</i>	Sample Depth: <i>0.1</i> m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.): <i>- orange-brown</i> <i>- clay fine</i> <i>- Soft / "suddy"</i> <i>- High water content / saturated</i>	
Field Records/Comments <i>- Clay pan / Mangrove / Wetland</i> <i>- Orange-brown</i>	
SAMPLING DETAILS:	Sample ID: <i>0760-SD009-250116</i>
Time: <i>0910</i>	No of Sample Containers: <i>1</i>
Duplicate Samples ☒	Duplicate Sample ID ☒
Comments: <i>PFAS red. sample.</i>	



Surface Water & Sediment Field Sheet

Client:	Location ID:
Project:	Project No.:
Property ID/Name:	Date/Time:
Undertaken By:	Weather:
SEDIMENT SAMPLING DETAILS	
Time:	Sample Depth: m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.):	
Field Records/Comments	
SAMPLING DETAILS:	Sample ID:
Time:	No of Sample Containers:
Duplicate Samples ☐	Duplicate Sample ID
Comments:	



Sediment Sampling Field Sheet

Client: <i>Defence</i>	Location ID: <i>SD305</i>
Project: <i>oart</i>	Project No.: <i>12641234</i>
Property ID/Name: <i>hearmouth</i>	Date/Time: <i>14 JAN 25</i>
Undertaken By: [REDACTED]	Weather: <i>Cloudy</i>
SEDIMENT SAMPLING DETAILS	
Time: <i>1010</i>	Sample Depth: <i>0.1</i> m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.): <i>- Sand (coarse)</i> <i>- Gravelly</i> <i>- Abundant shell fragments</i> <i>- Orange-brown</i> <i>- Saturated</i>	
Field Records/Comments	
<i>- From edge of creek</i>	
SAMPLING DETAILS:	Sample ID: <i>0760-SD305-250116</i>
Time: <i>1010</i>	No of Sample Containers: <i>1</i>
Duplicate Samples ☒	Duplicate Sample ID ☒
Comments:	



Surface Water & Sediment Field Sheet

Client:	Location ID:
Project:	Project No.:
Property ID/Name:	Date/Time:
Undertaken By:	Weather:
SEDIMENT SAMPLING DETAILS	
Time:	Sample Depth: m
Sediment Observations (i.e. odour, colour, particle size, consistency, etc.):	
Field Records/Comments	
SAMPLING DETAILS:	Sample ID:
Time:	No of Sample Containers:
Duplicate Samples ☐	Duplicate Sample ID
Comments:	

QA Blank Sample Register Form

Date/Time	QA Blank Sample ID	Type (circle)	Notes (Rinsate taken off, field blank location etc.)	Containers	Initials
9/12/24	0960-QC301-241209	(RB) FB TB	dipper	2 PFAS	
"	0960-QC401-241209	RB (FB) TB	near MW114 3:55	2 PFAS	
10/12/24	0960-QC302-241210	(RB) FB TB	frcwell	11	
"	0960-QC402-241210	RB (FB) TB	near SD235 2:05	11	
11/12/24	0960-QC303-241211	(RB) FB TB	trowel	11	
"	0960-QC403-241211	RB (FB) TB	near MW162 3:57	11	
12/12/24	0960-QC304-241212	(RB) FB TB	clipper	11	
"	0960-QC404-241212	RB (FB) TB	near MW174 10:15	11	
12/12/24	0960-QC501-241212	RB FB (TB)	TBW1795 (leaking in bag) 3:50	11	
13/12/24	0960-QC502-241213	RB FB (TB)	TBW1787 8:30	11	
13/12/24	0960-QC503-241213	RB FB (TB)	TBW1807 8:50	11	
13/12/24	0960-QC405-241213	RB (FB) TB	near 25SEN bridge 11:09	11	
13/12/24	0960-QC305-241213	(RB) FB TB	taken off dipper	11	
14/12/24	0960-QC306-241214	(RB) FB TB	dipper	11	
14/12/24	0960-QC406-241214	RB FB TB	taken near OTH129	11	

QA blank sample register

QC Duplicate Sample Register Form

Date	Full Primary Sample ID	Blind Duplicate Sample ID (QC1XX)	Split Duplicate Sample ID (QC2XX)	Containers	Initials
10/12/24	0960-SD123-0.1-241210	0960-QC101-241210	0960-QC201-241210	3 soil PFA	
11	0960-SD219.0.1-241210	0960-QC102-241210	0960-QC202-241210	11	
11/12/24	0960-SD243-0.1-241211	0960-QC103-241211	0960-QC203-241211	11	
11/12/24	0960-SD243-0.1-241211				
12/12/24	0960-MW126-241212	0960-QC104-241212	0960-QC204-241212	4 bottles	
11	0960-MW166-241212	0960-QC105-241212	0960-QC205-241212	11	
13/12/24	0960-MW229-241213	0960-QC106-241213	0960-QC206-241213	3 bottles	
13/12/24	0960-MW122-241213	0960-QC107-241213	0960-QC207-241213	4 bottles	
14/12/24	0960-SD227-0.1-241214	0960-QC108-241213	0960-QC208-241214	3 soil PFA	
15/12/24	0960-OTH103-241215	0960-QC109-241215	0960-QC209-241215	4 bottles	
15/12/24	0960-MW177-4.5-241215	0960-QC110-241215	0960-QC210-241215	11	
11	0960-SD301-0.1-241215	0960-QC111-241215	0960-QC211-241215	3 soil PFA	
15/12/24	0960-15W300-241215	0960-QC112-241215	0960-QC212-241215	7 SW bottles	
16/12/24	0960-MW137-3.0-241215	0960-QC113-241216	0960-QC213-241216	4, SUT	

(B)

QC Duplicate Sample Register Form – 0960 RAAF Learmonth

Date	Full Primary Sample ID	Blind Duplicate Sample ID (QC1XX)	Split Duplicate Sample ID (QC2XX)	Containers	Initials
16/12/24	0960-MW178-B-241216	0960-QC114-241216	0960-QC214-241216	SUT 4 bottles	

0960 Learmonth

QC Duplicate Sample Register Form - ~~0082 + 0083 HEH A/B~~

Date	Full Primary Sample ID	Blind Duplicate Sample ID (QC1XX)	Split Duplicate Sample ID (QC2XX)	Containers	Initials
16 JAN 25	0960-MW180A-250116	0960-QC115-250116	0960-QC215-250116	2x20ml pfa 2x25ml pfa	
11	0960-MW181A-250116	0960-QC116-250116	0960-QC216-250116	1	
11	0960-MW140A-250116	0960-QC117-250116	0960-QC217-250116	1	



June 2025 Sampling Event Report

PFAS OMP – RAAF Base Learmonth

Department of Defence

19 December 2025

→ **The Power of Commitment**



Project name		Defence PFASIM LC WA					
Document title		June 2025 Sampling Event Report PFAS OMP – RAAF Base Learmonth					
Project number		12641234					
File name		12641234_0960_RAAF Base Learmonth_OMP Post Summer Factual Report 2025.docx					
Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S3	A (Draft)	██████████	██████████	On file	██████████	On file	11/09/25
S4	0	██████████	██████████	██████████	██████████	██████████	19/12/25

GHD Pty Ltd | ABN 39 008 488 373

Contact: ██████████ | GHD
999 Hay Street, Level 10
Perth, Western Australia 6000, Australia
T +61 8 6222 8222 | **F** +61 8 6222 8555 | **E** permail@ghd.com | **ghd.com**

© GHD 2025
This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

List of acronyms

Acronym	Term
ADWG	Australian Drinking Water Guidelines
AFFF	Aqueous film-forming foam
AHD	Australian Height Datum
AS/NZS	Australian Standards/ New Zealand Standards
bgl	Below ground level
CoC	Chain of Custody
CSM	Conceptual Site Model
DCMM	Defence Contamination Management Manual
Defence	Department of Defence
DO	Dissolved oxygen
DSI	Detailed Site Investigation
DQIs	Data Quality Indicators
DWER	Department of Water and Environmental Regulation
EC	Electrical Conductivity
EPA	Environmental Protection Authority
EPC	Exposure Point Concentration
ERA	Ecological Risk Assessment
HDPE	High-Density Polyethylene
HEPA	Heads of EPA
LCS	Laboratory control sample
LOR	Limit of reporting
MW	Monitoring Well
NEMP	National Environmental Management Plan Version 3.0
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NPUG	Non-Potable Use of Groundwater
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation reduction potential
PFAS	Per- and poly-fluoroalkyl substances
PFBS	Perfluorobutane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PMAP	PFAS Management Area Plan

Acronym	Term
QA/QC	Quality Assurance and Quality Control
RAAF	Royal Australian Air Force
RPD	Relative percentage difference
SAQP	Sampling Analysis and Quality Plan
SW	Surface Water
TDS	Total Dissolved Solids
WA	Western Australia

List of units

Units	Term
%	Percentage
°C	Degrees Celsius
µg/L	Micrograms per Litre
µS/cm	Micro Siemens per Centimetre
g	Grams
km	Kilometre
L	Litre
m	Metre
mg/kg	Milligrams per Kilogram
mm	Millimetre
mV	Millivolt
pH	Potential of Hydrogen

Contents

1. Introduction	1
1.1 Objectives	1
1.2 Purpose of this report	1
2. Scope of work	2
2.1 Sampling locations	2
2.1.1 Groundwater monitoring locations	2
2.1.2 Seepage monitoring locations	2
2.1.3 Surface water and sediment locations	3
2.2 SAQP deviations	3
3. Methodology	5
3.1 Sampling methodology	5
3.1.1 Groundwater sampling methodology	5
3.1.2 Surface water sampling methodology	7
3.1.3 Sediment sampling methodology	7
3.1.4 Seepage sampling methodology	8
3.2 Quality assurance and quality control	9
4. Guideline values	10
5. Field observations and results	11
5.1 General observations	11
5.2 Field observations and measurements	11
5.3 Summary of analytical results	12
5.3.1 Groundwater	12
5.3.2 Seepage water	14
5.3.3 Surface water	14
5.3.4 Sediment	15
6. Summary and recommendations	15
6.1 Summary of monitoring events	15
6.2 Upcoming sampling events	17
6.3 Upcoming ongoing monitoring report	17
7. References	18
Limitations	19

Table index

Table 1	OMP Groundwater monitoring locations	2
Table 2	OMP seepage monitoring locations	2
Table 3	Surface water and sediment monitoring locations	3
Table 4	Summary of deviations from the OMP SAQP	3
Table 5	Groundwater sampling methodology	5
Table 6	Surface water sampling methodology	7

Table 7	Sediment sampling methodology	8
Table 8	Relevant PFAS assessment guideline values	10
Table 9	General field observations	11
Table 10	Summary of field observations and measurements	11
Table 11	Deviations from historical dataset – groundwater analytical results	13
Table 12	Exceedances of non-standard LOR groundwater results and EPC	13
Table 13	Deviations from historical dataset – seepage monitoring locations	14
Table 14	Exceedances of non-standard LOR seepage results and EPC	14
Table 15	Exceedances of non-standard LOR surface water results and EPC	15
Table 16	Summary of sampling event	16

Figure index

Figure 1	Site Location and Management Area	22
Figure 2	Key Base features	23
Figure 3	Source Areas	24
Figure 4	Monitoring Locations	25
Figure 5	Inferred Groundwater Contours – June 2025	26
Figure 6	Groundwater PFOS concentrations – June 2025	27
Figure 7	Groundwater PFHxS concentrations – June 2025	28
Figure 8	Groundwater PFOA concentrations – June 2025	29
Figure 9	Surface Water and Seepage Water PFHxS + PFOS concentrations – June 2025	30
Figure 10	Surface Water and Seepage Water PFOA concentrations – June 2025	31
Figure 11	Sediment PFAS concentrations – June 2025	32

Appendices

Appendix A	Figures
Appendix B	Data validation
Appendix C	Results tables
Appendix D	Equipment calibration
Appendix E	Laboratory certificates and chain of custody documents
Appendix F	Field notes

1. Introduction

GHD Pty Ltd (GHD) has been engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at Royal Australia Air Force (RAAF) Base Learmonth (hereafter referred to as the 'base') in Western Australia (WA). The location of the base and the surrounding PFAS Management Area is shown in Figure 1 in Appendix A. Key base features and PFAS source areas are shown in Figure 2 and Figure 3 in Appendix A.

The OMP (Defence, 2019) and its associated Sampling Analysis and Quality Plan (SAQP, GHD 2025) outline the rationale and scope for the monitoring of the concentrations and extent of PFAS in groundwater, surface water, sediment and seepage water at the base and within the Management Area. Monitoring is undertaken on a biannual basis including an event between June and July and another between November and December. This Sampling Event Factual Report documents the results of the sampling event that was completed in June 2025.

1.1 Objectives

The key objectives of the OMP are to evaluate:

- The spatial and temporal (including seasonal) nature and extent of PFAS impact in the environment associated with site sources of PFAS derived from legacy use of aqueous film-forming foam (AFFF);
- Changes to the Conceptual Site Model (CSM), which describes the current understanding of PFAS sources, transport pathways and receptors;
- Whether current risks to human and ecological receptors require review;
- The influence that risk management activities at the base, as outlined in the PFAS Management Area Plan (PMAP) (Defence, 2019) have had on PFAS in the environment; and
- Whether any identified changes trigger an action and/or review.

The data will assist in the timely identification of risks and inform Defence's approach to the management of PFAS, including updates and revisions to the PMAP.

1.2 Purpose of this report

This Sampling Event Factual Report documents the results of the June 2025 Sampling Event, specifically highlighting first-time detections and/or new exceedances of relevant guideline values for perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), perfluorooctanoic acid (PFOA) and perfluorobutane sulfonic acid (PFBS).

An Ongoing Monitoring Report (OMR) will be prepared following the completion of each 12-month sampling period or as otherwise agreed.

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

2. Scope of work

The scope of work was completed with reference to the SAQP GHD (2025), as follows:

- Organised fieldwork and obtained approval for base access to monitoring locations.
- Collection of samples and water quality parameters from nominated locations (refer to Section 2.1).
- Collection of samples for quality assurance and quality control (QA/QC).
- Analysis of samples for PFAS at the limit of reporting (LOR) nominated in the SAQP.
- Data management of the OMP field and laboratory data in the Defence ESdat database.
- Preparation of this Sampling Event Factual Report for the June 2025 Sampling Event.

2.1 Sampling locations

2.1.1 Groundwater monitoring locations

The groundwater monitoring locations are presented in Table 1 and are shown in Figure 4 in Appendix A.

Table 1 OMP Groundwater monitoring locations

Area	Monitoring Well/Bore ID
Source Areas	Source 1 – Maintenance Area: MW018, MW021, MW112, MW113, MW114, MW115, MW162, MW164, MW165, MW166, MW167, MW168, MW211, MW233. Source 2 – Fuel Farm MW105, MW148D, MW148S, MW151, MW159, MW238
Pathway (northern, central and southern drainage channels)	MW102, MW103, MW104, MW122, MW124, MW126, MW127, MW134, MW135, MW139, MW140, MW143, MW144, MW145, MW146, MW147, MW170, MW172, MW175, MW180, MW181.
Receptor (Wapet Creek)	MW137 [^] , MW141 [^] , MW176 [^] , MW177 [^] , MW178 [^] , MW179 [^] .
Additional wells	MW132 [#] , MW174 [#] , MW222 [#] (previously MW0124), MW227 [#] (previously SMB1) to MW230 [#] (previously SMB4)
Notes: * A non-standard LOR (not greater than 0.0003 µg/L for PFOS plus PFHxS and 0.0005 µg/L for PFOA) was applied at these locations so that a holistic assessment of potential impacts to identified receptors can be made by comparing PFAS concentrations with the exposure point concentrations (EPC) adopted to inform the Ecological Risk Assessment (ERA, GHD 2019). [^] Sampling of all screened intervals at these multilevel/nested wells locations was undertaken so that a holistic assessment of potential impacts to identified receptors can be made. Multilevel/nested wells other than these had only the shallowest, non-dry well monitored. [#] Locations were subject to analysis to non-standard ('low level') LOR to provide a preliminary assessment of PFAS concentrations to the Australian Drinking Water Guidelines (ADWGs, refer to Section 4)	

2.1.2 Seepage monitoring locations

The seepage monitoring locations are presented in Table 2 and are shown in Figure 4, Appendix A.

Table 2 OMP seepage monitoring locations

Area	Seepage location ID
Receptor (Exmouth Gulf)	OTH103, OTH106, OTH107, OTH129, OTH132, OTH134.
Notes: A non-standard LOR (not greater than 0.0003 µg/L for PFOS plus PFHxS and 0.0005 µg/L for PFOA) was applied at all seepage locations so that a holistic assessment of potential impacts to identified receptors can be made by comparing PFAS concentrations with the EPC adopted to inform the ERA (GHD 2019).	

2.1.3 Surface water and sediment locations

The co-located surface water and sediment monitoring locations are presented in Table 3 and are presented in Figure 4 in Appendix A.

Table 3 Surface water and sediment monitoring locations

Area	Surface water sampling location ID	Sediment sampling location ID
Drainage channels	SW108, SW113, SW114, SW121, SW122, SW123, SW124, SW125, SW157, SW166, SW168, SW170, SW174, SW176, SW189, SW190, SW192*, SW193, SW198, SW199, SW200, SW219, SW227, SW231, SW234, SW235, SW243, SW265, SW277, SW278, SW279, SW288, SW291, SW292, SW293, SW298*	SD199, SD200, SD219, SD108, SD113, SD114, SD121, SD122, SD123, SD124, SD125, SD157, SD166, SD168, SD170, SD174, SD176, SD189, SD190, SD192, SD193, SD198, SD227, SD231, SD234, SD235, SD243, SD265, SD277, SD278, SD279, SD288, SD291, SD292, SD293, SD298
Receptor (Wapet Creek)	SW001, SW205, SW207, SW208*, SW209*, SW210*, SW211*, SW300, SW301*, SW302, SW303, SW304, SW305*	SD205, SD207, SD208, SD209, SD210, SD211, SD300, SD301, SD302, SD303, SD304, SD305, SD009
Notes: *A non-standard LOR (not greater than 0.0003 µg/L for PFOS plus PFHxS and 0.0005 µg/L for PFOA) was applied at these locations so that a holistic assessment of potential impacts to identified receptors can be made by comparing PFAS concentrations with the EPC adopted to inform the ERA (GHD 2019).		

2.2 SAQP deviations

The June 2025 sampling event was completed with reference to the OMP SAQP (GHD, 2025), GHD's health and safety protocols and GHD's standard operating procedures for field work, which have been developed in accordance with WA contaminated land guidance. Deviations from the SAQP are outlined in Table 4.

Table 4 Summary of deviations from the OMP SAQP

Location	Deviation	Comments
MW163	Not sampled	The headworks and bore casing were previously damaged (likely by a vehicle) and therefore the well could not be sampled. The monitoring well was recorded as damaged during the May 2024 monitoring event (Stantec, 2024a). Minimal impact –Monitoring wells down gradient of MW163, closer to sensitive receptors of the Wapet Creek and the marine environment were able to be sampled (e.g., MW112, MW166, MW145, MW179). Base-wide groundwater contours were able to be inferred based on the wider monitoring network.
MW238	Not sampled	This monitoring well was accidentally struck by a vehicle during the previous sampling event (December 2024). The headworks and bore casing were damaged and therefore the well could not be sampled. Minimal impact –Monitoring wells down gradient of MW238, closer to sensitive receptors of the marine environment, were able to sampled (e.g., MW148, MW104, MW134). Base-wide groundwater contours were able to be inferred based on the wider monitoring network.
MW239	Sampled as additional data point	The shallowest well of this multi-level well was sampled as an additional data point, given the reported damage of MW138, which previously formed part of the OMP though was removed from the OMP SAQP given the reported damage. Minimal impact – Due to its proximity (i.e., approximately 5 m apart) to damaged well MW138 and the consistent screened intervals (i.e., both wells are screened from 3 to 3.5 m bgl) it is considered a suitable alternative well.

Location	Deviation	Comments
SW108, SW113, SW114, SW121, SW122, SW123, SW124, SW125, SW157, SW166, SW168, SW170, SW174, SW176, SW189, SW190, SW198, SW199, SW200, SW210, SW219, SW227, SW231, SW234, SW235, SW243, SW265, SW277, SW278, SW279, SW288, SW291, SW292, SW293 and SW298	Not sampled	These surface water monitoring locations were dry at the time of the sampling event. Minimal impact – supports existing understanding concerning temporally limited duration of flow in the base drains and waterways. Sediment data was collected at co-located monitoring locations.

3. Methodology

3.1 Sampling methodology

The methodology for the June 2025 Sampling Event was completed with reference to the SAQP (GHD, 2025), as outlined in the following sections.

3.1.1 Groundwater sampling methodology

The groundwater sampling methodology is outlined in Table 5.

Table 5 Groundwater sampling methodology

Activity	Details
Well Gauging	Monitoring wells were first gauged to allow subsequent correction of groundwater levels relative to Australian Height Datum (AHD) prior to groundwater sample collection. All depth measurements referenced the top of the well casing as an established datum.
Groundwater Physicochemical Parameters	The physicochemical parameters were recorded via a pre-calibrated water quality meter from water decanted into a cup from the HydraSleeves® or via a flow through cell connected to a low flow micropurge pump (depending on the sampling method applied). The following parameters were recorded: – pH. – Electrical conductivity (EC). – Oxidation reduction potential (ORP). – Dissolved oxygen (DO). – Temperature. – Total Dissolved Solids (TDS). The water quality meter was calibrated by the equipment supplier and daily readings of reference solutions ("bump tests") were completed to optimise the accuracy of the measurements taken.
Deployment and Retrieval of HydraSleeves®	In compliance with section 18 of the Heads of EPA National Environmental Management Plan 3.0 (HEPA NEMP), groundwater samples were collected using bore-dedicated polypropylene HydraSleeves®. The HydraSleeves® were installed and left in place for a minimum of 24 hours prior to retrieving for sample collection. Where monitoring well construction details were available, the HydraSleeves® were positioned to target the approximate mid-section of the water column beneath the screened interval. Where construction details were not available, the HydraSleeves® were placed approximately 1 m from the base of the monitoring well (where sufficient depth of water was present within the well column). Samples were collected via continuous pull method at a rate allowing the water to pass through the check valve into the sample sleeve. Samples were discharged immediately (to minimise changes in chemistry) via discharge tube. Following sampling, new HydraSleeves® were deployed in preparation for the next OMP monitoring event using the same string for consistency (same depth of sampling i.e. within screen depth). In the event that a monitoring well was found to contain a HydraSleeve® that belonged to another program, the HydraSleeve® was used for sampling (if it was in satisfactory condition) as outlined above, then replaced with a new HydraSleeve®. This did not occur during the June 2025 sampling event.
Alternative sampling methodology (low flow micro-purge)	Sampling via low flow micro-purge pump occurred if: – A HydraSleeve® was retrieved with no or insufficient sample volume. During the June 2025 sampling event, this occurred at monitoring well MW132 and MW159. – The groundwater well casing was too narrow to accommodate a HydraSleeve® (i.e., multi-level wells). The following multi-level monitoring well locations were too narrow to accommodate a HydraSleeve® and required the use of the low flow pump: MW135, MW137, MW140, MW141, MW143, MW144, MW145, MW146, MW147, MW175, MW176, MW177, MW178, MW179, MW180, MW181 and MW239.

Activity	Details
	MW132 was sampled via a low flow pump due to the well being blocked. Less than 10 cm of water was present within well column which was insufficient water to allow sample collection using a HydraSleeve®. The methodology comprised: – Post-gauging, each monitoring well was purged using the low flow micro-purge pump and inert well-dedicated High-density Polyethylene (HDPE) tubing. The upper end of the tubing was connected to the flow cell of a water quality meter positioned to prevent entrapment of oxygen. – The pump intake was placed approximately 0.5 m below the top of screen (or at least 0.5 m below the top of the water column) to ensure collection of samples representative of groundwater quality beneath the base. – Measurement of water quality parameters was undertaken immediately after the flow cell was full and continued thereafter at two to five-minute intervals during the purging process. – Purging was undertaken until stabilisation of field parameters was achieved after which the well was subsequently sampled. Parameters were considered stable when they are within the following range (where practicable within the time constraints of the program): ○ Temperature: +/- 0.2 °C* ○ pH: +/- 0.05 ○ EC: +/- 3% ○ DO: +/- 10% ○ ORP: +/- 10 mV - Representative groundwater samples were collected directly from the HDPE tubing into laboratory supplied sample containers. <i>*Note: The SAQP (GHD, 2025) erroneously states variation in temperature should be +/- 0.02 °C rather than +/- 0.2 °C</i>
Field Records	Field records included the following information: – Gauging data – Sampling time and date. – Weather conditions. – Sample collection method. Where a HydraSleeve® is used for sample collection, the target interval depth was recorded. – Stabilised field parameters. – Observations regarding water quality (e.g., turbidity, colour etc.) or obvious indicators of contamination (e.g., sheens). – Sampling equipment decontamination procedures where non-disposable sampling equipment is utilised. – Calibration and daily bump test records. – Well gauging records. All sample documentation including field notes, reporting records, Chain of Custody (CoC) and equipment calibration certificates and procedures were retained within project files.
Decontamination procedure	Dedicated HydraSleeves®, sample tubing (where required) and single use nitrile gloves were used at each groundwater bore thus preventing cross-contamination. Single use nitrile gloves were worn during sampling and appropriately disposed of between each sampling location. All re-usable sampling equipment (i.e., the groundwater depth gauging meter) was thoroughly washed using PFAS and phosphate-free detergent (mixed per supplier instructions) then double rinsed with laboratory-supplied rinsate water before the sample collection.
Sample identification, preservation transport and holding times	Each sample bottle was pre-labelled by the laboratory with a unique barcode which was scanned into a mobile application to generate the CoC. Samples were collected directly in laboratory supplied bottles (Teflon-free) and packed in chilled containers for delivery to the laboratory under CoC documentation. Sample containers, preservation procedures, sample storage requirements and holding times were undertaken in accordance with those recommended by Standards Australia (AS/NZS 5667.1:1998).

3.1.2 Surface water sampling methodology

The methodology for the surface water monitoring is detailed in Table 6.

Table 6 *Surface water sampling methodology*

Item	Details
Physicochemical parameters	Surface water physiochemical parameters (i.e., pH, EC, ORP, DO, TDS and temperature) were recorded at the time of sampling using a pre-calibrated water quality meter. Field observations such as odours or sheen presence were also recorded on field sampling sheets.
Sampling method	Where the embankment of the water body was stable and the water body could be safely accessed, surface water samples were collected by hand, directly into the laboratory supplied sample containers using a 'Grab' (manual) sample method. Where depth permits, the sample container was positioned at least 10 cm below the surface water level and above the sediment bed and oriented with the capped opening facing downwards to avoid the collection of surface films. Once in position, the container cap was removed to allow sample collection. Where sampling points could not be safely accessed, surface water samples were collected using a long-handled sampler and decanted into the laboratory supplied sample containers. Samples were collected in accordance with Australian/New Zealand Standards (AS/NZS 5667.1:1998) Water quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
Sample collection	Water samples were placed directly into appropriately labelled, laboratory-supplied sample bottles and packed in chilled containers for delivery to the laboratory under CoC documentation.
Decontamination	Single use nitrile gloves were worn during sampling and appropriately disposed of between each sampling location. All re-usable sampling equipment was thoroughly washed using PFAS and phosphate-free detergent (mixed per supplier instructions) then double rinsed with laboratory-supplied rinsate water before the sample collection.
Sample identification, preservation, transport and holding times	Each sample container was pre-labelled by the laboratory with a unique barcode which was scanned into a mobile application to generate the CoC. Samples were contained in laboratory supplied bottles (Teflon-free) and packed in chilled containers for delivery to the laboratory under CoC documentation. Sample containers, preservation procedures, sample storage requirements and holding times were undertaken in accordance with those recommended by Standards Australia (AS/NZS 5667.1:1998 as appropriate).
Field records	Field records included the following information: – Sampling time and date. – Weather conditions. – Sample collection method. – Field parameters. – Observations regarding water quality (e.g., turbidity, colour etc.) or obvious indicators of contamination (e.g., sheens). – Sampling equipment decontamination procedures where non-disposable sampling equipment was utilised. – Calibration and daily bump tests records. All sample documentation including field notebooks, reporting records, CoC and equipment calibration certificates and procedures were retained within project files.

3.1.3 Sediment sampling methodology

The methodology for sediment sampling is detailed in Table 7.

Table 7 *Sediment sampling methodology*

Item	Details
Sediment sample collection	Sediment samples were collected at the sediment/water interface using hand tools (e.g. trowel, hand auger, PVC pipe etc.) with samples placed directly into appropriately labelled, laboratory supplied sample containers and packed in chilled containers for delivery to the laboratory under CoC documentation. At each sampling location, the sediment sample was visually assessed and observations (including physical description) recorded on field data sheets.
Field records	Field records included the following information: – Sampling time and date. – Weather conditions. – Sample collection method. – Observations regarding sediment quality (e.g., colour, grain size etc.) or obvious indicators of contamination (e.g., staining). – Sampling equipment decontamination procedures where non-disposable sampling equipment is utilised. All sample documentation including field notebooks, reporting records, CoC and equipment calibration certificates and procedures were retained within project files.
Decontamination	Single use nitrile gloves were worn during sampling and appropriately disposed of between each sampling location. All re-usable sampling equipment was thoroughly washed using PFAS and phosphate-free detergent (mixed per supplier instructions) then double rinsed with laboratory-supplied rinsate water before the sample collection.

3.1.4 Seepage sampling methodology

Seepage sampling was completed by advancing a shallow excavation in the beach sand; just above where inundation by wave action was occurring, using a spade. In-situ water parameters were measured from water seeping into the excavation using a calibrated water quality meter. Water seeping into the excavation was purged prior to measuring water quality parameters (using a dedicated syringe or jug). Once the excavation had recharged, a seepage sample was collected directly into sample containers using a 'grab' (manual) sample method. Seepage sampling occurred during outgoing tides, as far as practicable within the temporal constraints of the tidal cycle at the time of the event.

Procedures concerning field records, decontamination, sample identification, handling, preservation and transport for seepage water sampling were consistent with those employed for groundwater sampling, as described in Table 5.

3.2 Quality assurance and quality control

Quality assurance (QA) involves all the actions, procedures, checks and decisions, undertaken to ensure the representativeness and integrity of samples and accuracy and reliability of analytical results (NEPM, 2013). Quality control (QC) involves protocols to monitor and measure the effectiveness of QA procedures.

The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (GHD, 2025). A review of the field and laboratory QA/QC performance from the investigation is presented in the QA/QC data validation report, Appendix B. Key findings of the data validation report include:

- The majority of the calculated relative percentage difference (RPD) in concentrations for each duplicate pair, as presented in the tables in Appendix B were within acceptable limits. In most cases, RPD values greater than the acceptance criterion of 30% are considered reflective of the proximity of the reported concentrations to the LOR (i.e., less than 10 times the LOR). On this basis, the RPDs greater than 30% are considered to have minimal impact on the data quality.
- Field blank analytical results were less than the LOR in all cases.
- Rinsate blank analytical results were less than the LOR in all cases.

Overall, the QA/QC assessment concluded that the collected data is considered appropriate for the work undertaken and are considered usable for the purpose of this assessment.

All data collected during this event has been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual (DCMM) requirements (Department of Defence, 2018).

4. Guideline values

A summary of the current PFAS guideline values for groundwater and surface water considered relevant to the base is presented as Table 8. The guideline values are largely based upon:

- The PFAS NEMP (HEPA, 2025) which presents a consolidated set of health- and ecology-based Australian PFAS assessment levels for soil and water that are derived from various guidelines and publications. It is noted that the aquatic ecosystems guideline value for PFOS is less than the standard LOR that was applied at most monitoring locations. Consistent with the OMP SAQP, a lower, non-standard LOR was applied during the monitoring event at selected groundwater, seepage water and surface water locations to support ecological risk screening by enabling comparison of PFAS concentrations with the EPCs adopted to inform the ERA (GHD, 2019).
- The National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines (ADWGs) for PFAS that were published on 25 June 2025 (NHMRC, 2025). It is noted that the ADWG value for PFOS is less than the standard PFAS LOR that was applied at most monitoring locations.

It is noted that there is currently no Australian regulatory endorsed screening criteria for risk posed to ecology or human health by PFAS in sediment.

Table 8 *Relevant PFAS assessment guideline values*

Exposure scenario	Source	Assessment guideline value (µg/L)				
		PFOS	PFHxS	PFOS+ PFHxS	PFOA	PFBS
Groundwater						
Health: potable use of groundwater	NHMRC (2025)	0.008	0.03	-	0.2	1
Surface water and pore water						
Health: Recreational water use	PFAS NEMP	2	2	2	10	-
Ecology: aquatic ecosystems (99% species protection)		0.00023	-	-	19	-

It is important to note that an ERA (GHD, 2019) has been completed for the base to assess the potential risks to the environment associated with presence of PFAS within the Management Area. While the OMP evaluates PFAS concentration data with reference to the ecology-based guideline values identified in Table 8, decision-making concerning changes to risks posed to ecology within the Management Area should continue to be made with reference to the ERA conclusions and the dataset that informed it.

5. Field observations and results

5.1 General observations

The sampling event was completed between 23 and 30 June 2025. The weather conditions and general observations (including activities that may impact the monitoring program) recorded during the sampling event are summarised in Table 9.

Table 9 General field observations

Items	Observations
Weather Conditions	During the sampling event, the weather was observed to be mostly warm and dry, with maximum daily temperatures ranging from 23.9 °C (24 June 2025) to 25.9 °C (26 June 2025). No rainfall was recorded during the sampling event. The most recent rainfall event prior to the sampling event was on 19 June, 4 days prior, when 4.2 mm of rainfall was recorded. Information obtained from Exmouth WA (Station ID 005051) (Bureau of Meteorology, 2025).
Estate Management Works, Training Activities and/or Construction Works.	None observed.

5.2 Field observations and measurements

The observations and measurements recorded during the field activities for the June 2025 sampling event are summarised in Table 10.

Table 10 Summary of field observations and measurements

Item	Description
Access and sample collection	Most sampling locations were accessible and able to be sampled. Some groundwater locations were unable to be sampled due to being damaged or blocked. Where available, a suitable alternative well was sampled. Many surface water locations were dry, reflective of the climate of the base and limited duration of flow in the base drains and waterways (refer to Table 4). With reference to Table C1 in Appendix C, the measured well depth in some monitoring wells when compared to the constructed well depth suggests sediment may have accumulated within the monitoring wells (e.g. MW021, MW104, MW105, MW112, MW113, MW124, MW126, MW127, MW132, MW139, MW141(A,B,C and D), MW146A, MW147A, MW148D, MW151, MW159, MW162, MW164, MW166, MW176(B,C,D), MW177D, MW178(B,C,D)). These wells were still able to be sampled.
Water and sediment observations	Groundwater was predominately pale yellow and colourless, with a low to moderate sediment load, no odour and no sheen. An organic odour was noted at MW113 and MW103. Seepage water was predominately pale yellow/brown with a moderate turbidity, varying sediment load and no odour and no sheen. Surface water was predominately pale yellow with low to moderate turbidity, low sediment load and no odour and no sheen. SW208 was noted to be a pale green colour. Sediment samples were observed to have various shades of orange/brown, medium plasticity sandy CLAY.
Groundwater flow direction	The calculated groundwater elevations (m AHD) are presented in Table C1, Appendix C and inferred groundwater flow direction presented in Figure 5, Appendix A. Groundwater elevations across the base at the time of the sampling event ranged from -0.477 (MW222) to 1.049 m AHD (MW233), which is broadly consistent with the historical range (i.e., a groundwater level range of -0.291 to 1.052 was recorded in June 2023 (Stantec, 2024b)). Based on the recorded groundwater levels, a broadly radial inward flow direction (i.e., from the coastline of the Exmouth Gulf and from the west towards the inland clay pan) was apparent at the time of the sampling event. This is broadly consistent with the flow direction inferred based on previous gauging data and as part of the Detailed Site Investigation (DSI) (GHD, 2018)

Item	Description
Physicochemical parameters	The recorded physicochemical parameters are presented in Tables C1, C2 and C3 in Appendix C and are summarised below: Groundwater: – pH ranged from 6.64 (MW159) to 8.67 (MW170) indicating circum-neutral to basic conditions. – EC ranged from 1,728 µS/cm* to 110,887 µS/cm indicating brackish to highly saline conditions. – DO ranged from 0.04 mg/L (MW177) to 6.1 mg/L (MW178) indicating very low to moderately oxygenated conditions. – ORP ranges from -295.8 mV (MW132) to 86.1 mV (MW139) indicating both reducing and oxidising conditions. – Temperature ranged from 18.4 °C (MW222) to 30.7 °C (MW178). – TDS ranged from 433.1 mg/L (MW178) to 267,744 mg/L (MW144) indicating brackish to highly saline conditions. Surface water: – pH ranged from 7.59 (SW192) to 8.19 (SW208) indicating slightly basic to basic conditions. – EC ranged from 49,231 µS/cm (SW208) to 75,195 µS/cm indicating highly saline conditions. – DO ranged from 0.72 mg/L (SW193) to 7.13 mg/L (SW001) indicating both very low to moderately oxygenated conditions. – ORP ranged from -81.3 mV (SW193) to 54 mV (SW301)) indicating both reducing and oxidising conditions. – Temperature ranged from 19.4 °C (SW208) to 26.5 °C (SW192). Seepage water: – pH ranged from 7.91 (OTH103) to 8.14 (OTH132) indicating basic conditions. – EC ranged from 50,651 µS/cm to 51,883 µS/cm (OTH103) indicating highly saline conditions. – DO ranged from 4.3 mg/L (OTH107) to 6.06 mg/L (OTH106) indicating moderately oxygenated conditions. – ORP ranged from 22.2 mV (OTH134) to 50.2 mV (OTH107) indicating oxidising conditions. – Temperature ranged from 19.6 °C to 21.8 °C. – TDS ranged from 32,977 mg/L (OTH132) to 33,723 mg/L (OTH 103) indicating highly saline conditions. Field notes are presented in Appendix F.
Notes: * The lowest recorded EC value of 667 µS/cm was identified as a transcription anomaly and excluded from the assessment.	

5.3 Summary of analytical results

The PFAS analytical results for groundwater, surface water, sediment and seepage water from this sampling event are presented in Table C4 to C7 in Appendix C and are also summarised in Figure 6 to Figure 11 in Appendix A.

5.3.1 Groundwater

71 primary groundwater samples were analysed for PFAS compounds, with:

- 20 samples reporting **PFBS** concentrations above the LOR. One of these was above the ADWG value (1 µg/L).
- 33 samples reporting **PFOS** concentrations above the LOR. Of these, 20 samples reported concentrations above the ADWG value (0.008 µg/L). A further 22 samples reported concentrations beneath the standard LOR (i.e., <0.01) and it therefore cannot be determined whether PFOS concentrations in these samples were above or below the ADWG value.
- 30 samples reporting **PFHxS** concentrations above the LOR. Of these, 20 samples reported concentrations greater than the ADWG value (0.03 µg/L).

- 17 samples reporting **PFOA** concentrations above the LOR. Of these, seven samples reported concentrations greater than the ADWG value (0.2 µg/L).

A summary of groundwater locations where concentrations were greater than those previously reported (i.e., first-time detections or new maximums) is presented as Table 11.

Table 11 Deviations from historical dataset – groundwater analytical results

Item	Sample location	PFBS (µg/L)		PFHxS (µg/L)		PFOA (µg/L)		PFOS (µg/L)	
		June 2025	Previous Max	June 2025	Previous Max	June 2025	Previous Max	June 2025	Previous Max
First time detections?	-	No first-time detections		No first-time detections		No first-time detections		No first-time detections	
New historical maximum	MW078	No new maximum		No new maximum		0.65	0.54	No new maximum	
	MW166	No new maximum		No new maximum		0.4	0.22	No new maximum	
	MW167	No new maximum		No new maximum		0.22	0.21	No new maximum	
	MW115	No new maximum		No new maximum		0.05	0.04	No new maximum	
	MW170	No new maximum		No new maximum		0.01	0.0021	No new maximum	
	MW174	No new maximum		No new maximum		No new maximum		0.002	0.001

Non-standard LOR analysis

As identified in Section 2.1.1, selected groundwater samples (MW137, MW141, MW176, MW177, MW178, MW179) were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the surface water and seepage water EPC for PFOS+PFHxS and PFOA that were adopted to inform the ERA (GHD, 2019). A comparison of the reported concentrations with the EPC is presented as Table 12.

Table 12 Exceedances of non-standard LOR groundwater results and EPC

Sample Location	Well	Screen Interval (m bgl)	PFOS+PFHxS (µg/L)	PFOA (µg/L)
EPC – Surface water (Wapet Creek)			0.0059	0.0005
EPC – Seepage (Exmouth Gulf)			0.0037	0.0005
EPC – Seepage (Wapet Creek)			0.0022	0.0005
MW137	A	0.8 – 1.3	0.0018	<0.0005
	B	2.5 – 30.	0.0041	<0.0005
	C	4.5 – 5.0	0.0065	<0.0005
	D	6.5 – 7.0	0.0057	<0.0005
MW141	D	7.0 – 7.5	0.0003	<0.0005
MW176	C	6.0 – 6.5	0.0028	<0.0005
MW177	B	3.5 – 4.0	0.0012	<0.0005
	C	6.0. – 6.5	0.0013	<0.0005
	D	8.5 – 9.0	0.0043	<0.0005
MW178	D	9.0 – 9.5	0.0028	<0.0005
MW179	A	1.0 – 1.5	0.0002	<0.0005
	B	3.2 – 3.7	0.0003	<0.0005
	C	5.9 – 6.4	0.0003	<0.0005

Notes:

Blue highlighting = concentration exceeds seepage EPC for Wapet Creek.

Blue highlighting and purple text= concentration exceeds seepage EPC for Wapet Creek and the Exmouth Gulf.

Blue highlighting and italics = concentration exceeds seepage and surface water EPC

5.3.2 Seepage water

In summary, six primary seepage water samples were analysed for PFAS compounds, with:

- Five samples reporting a **PFOS** concentration above the LOR. Four of these reported concentrations that exceeded the aquatic ecosystems guideline value (0.00023 µg/L) though all were less than the recreational guideline value (2 µg/L).
- No samples reporting a **PFHxS** concentration above the LOR.
- Five samples reporting a **PFOS+PFHxS** concentration above the LOR. All reported concentrations were less than the recreational guideline value (2 µg/L).
- Two samples reporting a **PFOA** concentration above the LOR. The reported concentrations were less than the aquatic ecosystems guideline value (19 µg/L) and the recreational guideline value (10 µg/L).

A summary of seepage locations where concentrations were greater than those previously reported (i.e., first-time detections or new maximums) is presented as Table 13.

Table 13 Deviations from historical dataset – seepage monitoring locations

Item	Sample Location	PFOS (µg/L)		PFHxS (µg/L)		PFOS+PFHxS (µg/L)		PFOA (µg/L)	
		June 2025	Prev. Max.	June 2025	Prev. Max.	June 2025	Prev. Max.	June 2025	Prev. Max.
First time detections?	OTH106	No first-time detections		No first-time detections		0.0037	<LOR	0.0034	<LOR
New historical maximum	OTH103	No new maximum		No new maximum		No new maximum		0.0022	0.0008
	OTH106	0.0037	0.001	No new maximum		No new maximum		No new maximum	

Non-standard LOR analysis

As identified in Section 2.1.2, samples from selected seepage water monitoring locations (OTH103, OTH106, OTH107, OTH129, OTH132 and OTH134) were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the seepage water EPC for PFOS+PFHxS and PFOA that were adopted to inform the ERA (GHD, 2019). A comparison of the reported seepage water concentrations with the relevant EPC is presented as Table 14.

Table 14 Exceedances of non-standard LOR seepage results and EPC

Sample Location	PFOS plus PFHxS (µg/L)	PFOA (µg/L)
EPC – Seepage (Exmouth Gulf)	0.0037	0.0005
OTH103	0.0011	0.0016
OTH106	0.0037	0.0034
OTH107	0.0003	<0.0005
OTH129	<0.0002	<0.0005
OTH132	0.0002	<0.0005
OTH134	0.0005	<0.0005
Notes:		
Blue highlighting = concentration exceeds seepage EPC.		

5.3.3 Surface water

16 primary surface water samples were analysed for PFAS compounds, with:

- Seven samples reporting a **PFOS** concentration above the LOR. Five of these exceeded the aquatic ecosystems guideline value (0.00023 µg/L). A further eight samples reported concentrations beneath the

standard LOR (i.e., <0.01) that was applied and it therefore cannot be determined whether PFOS concentrations in these samples were above or below the aquatic ecosystems guideline value.

- One sample (SW211) reporting a **PFHxS** concentration above the LOR. The reported concentration (0.0007 µg/L) was less than the recreational guideline value (2 µg/L).
- Seven samples reporting a **PFOS+PFHxS** concentration above the LOR. The reported concentrations were less than the recreational guideline value (2 µg/L).
- No samples reporting a **PFOA** concentration above the LOR.

There were no first-time detections or new maximum PFAS concentrations in surface water samples.

Non-standard LOR analysis

As identified in Section 2.1.3, samples from selected surface water monitoring locations (SW192, SW208, SW209, SW211, SW301 and SW305) were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the surface water EPC for PFOS+PFHxS and PFOA that were adopted to inform the ERA (GHD, 2019). Other selected sites (SW298, SW210) were dry and were unable to be sampled. A comparison of the reported seepage water concentrations with the relevant EPC is presented as Table 15.

Table 15 Exceedances of non-standard LOR surface water results and EPC

Sample Location	PFOS plus PFHxS (µg/L)	PFOA (µg/L)
EPC – Surface water (downstream drainage channels)	0.14	0.0006
SW192	0.0053	<0.0005
EPC – Surface water (Wapet Creek)	0.0059	0.0005
SW208	<0.0002	<0.0005
SW209	0.0004	<0.0005
SW211	0.0180	<0.0005
SW301	0.0003	<0.0005
SW305	0.0002	<0.0005
Notes: Blue highlighting = concentration exceeds surface water EPC.		

5.3.4 Sediment

49 primary sediment samples were analysed for PFAS compounds, with:

- 40 samples reporting a **PFOS** concentration above the LOR.
- 40 samples reporting a **PFHxS+PFOS** concentration above the LOR.
- Four samples reporting a **PFHxS** concentration above the LOR.
- One sample reporting a **PFOA** concentration above the LOR.
- No samples reporting a **PFBS** concentration above the LOR.

There were no first-time detections or new maximum PFAS concentrations in sediment samples.

6. Summary and recommendations

6.1 Summary of monitoring events

The findings and recommended actions from the June 2025 sampling event are summarised in Table 16.

Table 16 *Summary of sampling event*

Item	Comment	Recommended Action
Access to sampling locations	All locations were accessible.	Nil.
Location inaccessible, dry or blocked	With reference to Section 2.2 the following locations were unable to be sampled: – MW163 - the headworks and bore casing was damaged upon arrival. – MW138 – all casings on this multilevel well was blocked and unable to be sampled. – SW108, SW113, SW114, SW121, SW122, SW123, SW124, SW125, SW157, SW166, SW168, SW170, SW174, SW176, SW189, SW190, SW198, SW199, SW200, SW219, SW227, SW231, SW234, SW235, SW243, SW265, SW277, SW278, SW279, SW288, SW291, SW292, SW293, SW298 and SW210 – these surface water samples were dry and unable to be sampled As noted in Section 5.2, the measured well depth at some monitoring wells suggests these wells may have accumulated sediment within them. The wells were, however, still able to be sampled and the recorded PFAS concentrations were consistent with the historical dataset.	The historical range of PFAS concentrations at MW163 is understood from historical data. Base-wide groundwater contours were able to be inferred based on the wider monitoring network. Furthermore, a suitable alternative well was able to be sampled as replacement for MW138 (i.e., MW239). Therefore, replacement/repair of MW138 and MW163 is not recommended as a matter of priority at this time. The forthcoming OMP Revision will review the value of these monitoring wells in the context of the OMP objectives and make a recommendation for repair, re-installation or otherwise of these monitoring wells. Future monitoring events will seek to collect samples from surface water monitoring locations, though it is noted that the absence of surface water across the monitoring network has been common throughout implementation of the OMP to date (GHD, 2025). The Forthcoming OMP Revision will review the value of these surface water monitoring locations in the context of the OMP objectives and make a recommendation regarding retaining their inclusion in the OMP. The requirement to seek to remove accumulated sediment from monitoring wells will be considered as part of the forthcoming OMP Revision.
Analytical results	71 groundwater samples, six seepage water samples, 16 surface water samples and 51 sediment samples were analysed. Concentrations recorded were generally consistent with historical data.	Locations will be sampled again during the next OMP sampling event. Data will be evaluated further within the context of the OMP objectives (refer to Section 1.1) as part of the forthcoming OMR.
First-time detections of PFBS, PFHxS, PFOA and/or PFOS	One first time detection for PFOS+PFHxS was recorded during the sampling event at seepage monitoring location OTH106.	
New historical maximum concentrations	New maximum PFHxS and PFOA concentrations were recorded at groundwater wells MW078 (Wapet Creek), MW166, MW167, MW115 (Maintenance Area), MW170, and MW147 (Pathway) and seepage water OTH106 (Exmouth Gulf). In most cases, the new maximum concentrations were within the same order of magnitude as the previous maximums.	
New exceedance of human health guideline value?	Numerous groundwater monitoring locations recorded PFAS concentrations in excess of the revised ADWGs that were released in June 2025, concurrent with the sampling event. It is noted that the standard LOR that was applied (i.e., <0.01 µg/L) at most locations exceeds the revised ADWG for PFOS (0.008 µg/L). The base's potable water supply borefield, comprising ten bores, is located approximately 3 km west of the Base (i.e., inferred hydraulically up-gradient). Monitoring	

Item	Comment	Recommended Action
	wells MW132, MW174, MW222 and MW227 to MW230 are positioned between the base and the borefield and reported PFOS concentrations below the non-standard LOR (i.e., <0.002 µg/L) and therefore below the ADWGs, apart from location MW222 which reported a concentration of 0.013 µg/L.	
New exceedance of ecological health guideline value?	No surface water or seepage water locations reported new exceedances of the adopted ecological guideline values for PFOS and/or PFOA. Selected groundwater, seepage and surface water samples were analysed to a lower, non-standard LOR to enable comparison of reported concentrations with the EPC adopted to inform the ERA (GHD, 2019). Four groundwater monitoring locations (MW137, MW176, MW177 and MW178), two seepage locations (OTH103 and OTH106) and one surface water location (SW211) recorded concentrations above the EPCs.	

6.2 Upcoming sampling events

The next OMP sampling event is scheduled for June 2026.

6.3 Upcoming ongoing monitoring report

The next OMR is scheduled to be delivered in Q1 2026, covering data collected between November 2023 and June 2025.

7. References

- Bureau of Meteorology. (2025, March). *Climate Statistics for Australian Locations*.
- Defence. (2019). *RAAF Base Learmonth PFAS Management Area Plan*. May 2019.
- Department of Defence. (2018). *Defence Contamination Management Manual (DCMM) Annex L Data Management, Amended June 2021*.
- Department of Defence. (2021). *PFAS Ongoing Monitoring Plan Factual Report Guidance*.
- Department of Defence. (2024). *Ongoing Monitoring Program Reporting Guidance*. 29 February 2024.
- DWER. (2021, November). *Assessment and management of contaminated sites*. Retrieved from https://www.der.wa.gov.au/images/documents/your-environment/contaminated-sites/guidelines/Assessment_and_management_of_contaminated_sites.pdf
- GHD. (2018). *RAAF Base Learmonth: PFAS Investigations - Preliminary and Detailed Site Investigation Report*. December 2018.
- GHD. (2019). *RAAF Base Learmonth - Lead Consultant, Ecological Risk Assessment*. April 2019.
- GHD. (2025). *Sampling and Analysis Quality Plan, RAAF Base Learmonth*. 27 March, Rev 0.
- HEPA. (2025). *PFAS National Environmental Management Plan Version 3.0*. (NEMP): Heads of EPA Australia and New Zealand.
- NEPM. (2013). *National Environment Protection (Assessment of Site Contamination) Measure*.
- NHMRC. (2025, June 25). *NHMRC Review of PFAS in Australian Drinking Water*. Retrieved from <https://www.nhmrc.gov.au/health-advice/environmental-health/water/PFAS-review>
- Stantec. (2024a). *PFAS OMP Biannual Monitoring Event Factual Report*. May 2024.
- Stantec. (2024b). *Ongoing Monitoring Report (November 2022 - October 2023) RAAF Base Learmonth*. 25 July 2024.

Limitations

This report has been prepared by GHD for Department of Defence and may only be used and relied on by Department of Defence for the purpose agreed between GHD and Department of Defence as set out in Section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Department of Defence arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.

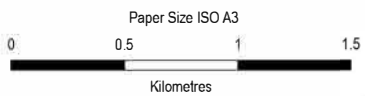
The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Department of Defence and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

Appendices

Appendix A

Figures



Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 50

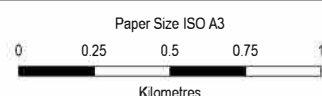


Department of Defence
RAAF Base Learmonth
Ongoing Monitoring Program

Project No. 12641234
Revision No. 0
Date 12/12/2025

Site Location and Management Area

FIGURE 1



Map Projection: Transverse Mercator
Horizontal Datum: GDA2020
Grid: GDA2020 MGA Zone 50



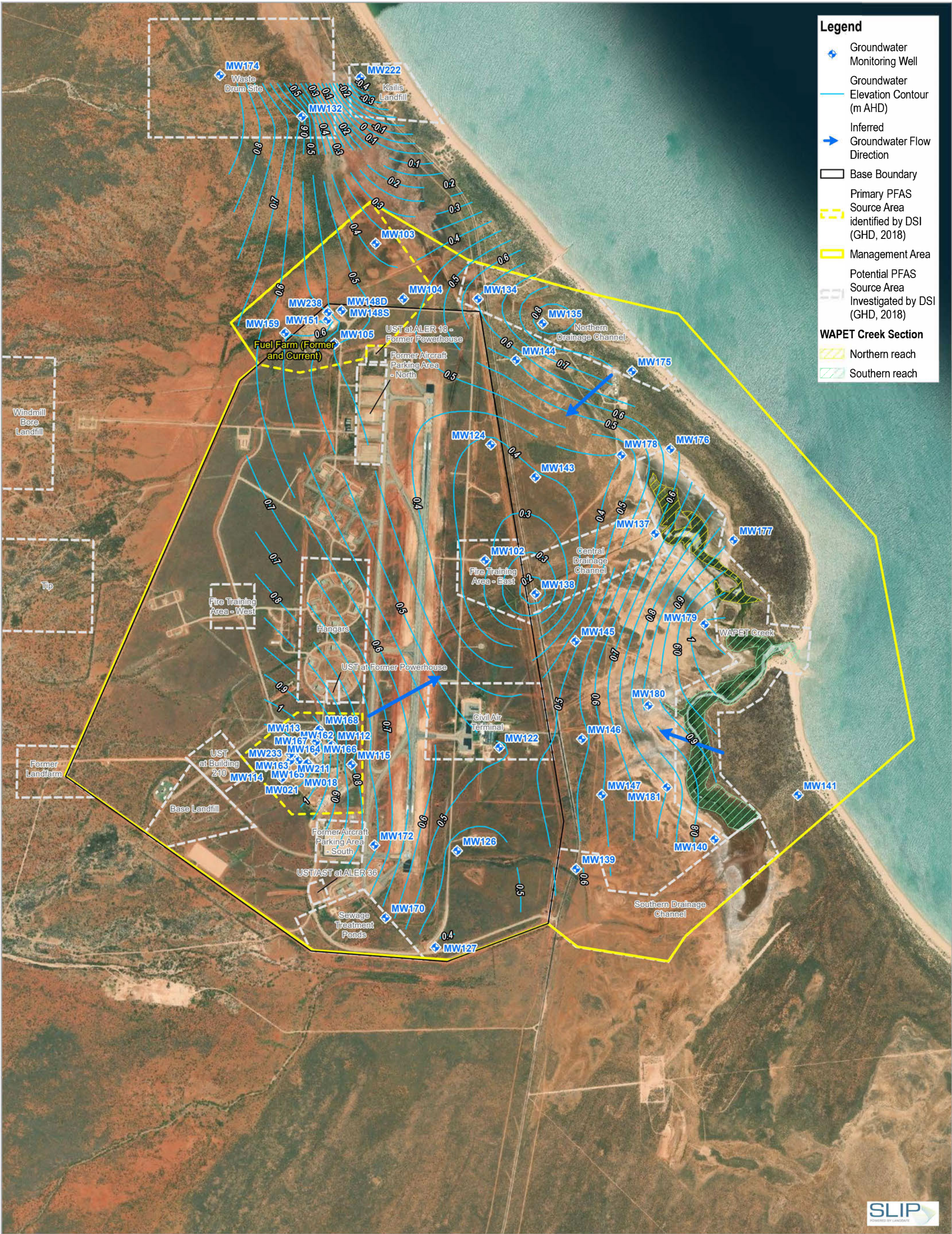
Department of Defence
RAAF Base Learmonth
Ongoing Monitoring Program

Key Base Features

Project No. 12641234
Revision No. 0
Date 12/12/2025

FIGURE 2











Appendix B

Data validation

Appendix B

RAAF Base Learmonth– June 2025 QA/QC Evaluation

The QA and QC procedures were undertaken in accordance with the ASC NEPM and the Assessment and management of contaminated sites (DWER, 2021) and the PFAS NEMP 3.0 (HEPA 2025).

QA involves all the actions, procedures, checks and decisions undertaken to ensure the representativeness and integrity of samples and the accuracy and reliability of analytical results (NEPC, 2013). QC involves protocols to monitor and measure the effectiveness of QA procedures.

B-1 Fieldwork Program

Field QA/QC procedures and compliance during the investigation are summarised in Table 1 below, with exceptions detailed in the following subsections.

Table 1 Summary of field work QA/QC compliance

QA/QC element	Requirement	Requirement adhered to?	Information / data acceptable?
Sampling methods	All sampling methods outlined in the RAAF Base Learmonth OMP SAQP (GHD 2025) were adhered to.	Yes	Yes
Record keeping	Detailed records of field activities were maintained with the use of electronic or paper field sheets and quality control sample registers.	Yes	Yes, see Appendix F
CoC documentation	The CoC documentation was completed for each batch of samples, identifying the names of the samplers, the type of sample, the collection date, the analyses to be performed, sample preservation methods, and time the samples were relinquished to the courier.	Yes	Yes, see Appendix E
Sample labelling	Samples were properly labelled, showing reference number, sample ID, date of collection, sampler name and preservation techniques.	Yes	Yes
Sample containers	Samples were collected in appropriate laboratory supplied containers with suitable preservation methods (where required).	Yes	Yes
Sample storage and transport	Samples were stored in a chilled esky immediately after sampling prior to submission to the laboratory. Samples were kept in a chilled esky during delivery with CoC documentation. Samples were received at the laboratory at the recommended temperature (4 °C).	Yes, with exceptions	Yes, see Section B-1.1.
Decontamination	Reusable field equipment (e.g. interface meter) were appropriately decontaminated using Liquinox between each sampling location.	Yes	Yes
Rinsate blanks	Rinsate samples were collected by the sampler on each day following decontamination of reusable sampling equipment. Analysis of rinsate blanks reported concentrations below laboratory LOR indicating equipment was decontaminated appropriately.	Yes, with exceptions	Yes, see Section B-1.2.
Field blanks	Field blanks were collected by the sampler on each day to estimate potential contamination of a sample during the collection procedure. Analysis of field blanks reported concentrations below laboratory LOR	Yes, with exceptions	Yes, see Section B-1.2.

QA/QC element	Requirement	Requirement adhered to?	Information / data acceptable?
	indicating no cross contamination occurred as a result of ambient conditions during sampling.		
Duplicate samples	Blind and split duplicate samples were collected for analysis by the primary and secondary laboratories, respectively (at a frequency of at least one pair per 10 primary samples). RPDs calculated for the duplicate samples were at or below 30%.	Yes, with exceptions	Yes, see Section B-1.3.

B-1.1 Sample containers, storage and transport

All samples were collected in appropriate laboratory supplied containers with suitable preservation methods (where applicable).

To aid sample integrity, all samples were promptly placed into a chilled esky (with double bagged ice) following collection. Eskies were delivered to the primary laboratory (ALS Environmental) and secondary laboratory (Eurofins) as soon as practicable via courier.

As summarised in Table 2, the sample receipts from primary and secondary laboratories noted the samples were higher than the recommended temperature (4 °C). However, these receipts also noted that an attempt to chill the samples and therefore it is considered that reasonable attempt to maintain the recommended sample temperature was made. It is noted that the significant distance of the base from the laboratories (i.e., approximately 1,250 km) is limiting upon the maintenance of low sample temperatures.

Table 2 Summary of sample temperatures

Lab report number	Temperature (°C)	Earliest Sample Date	Lab Received Date	Comments
EP2510792	15.8	23/06/2025	07/07/2025	"Ice present"
1241110	21.7	23/06/2025	04/07/2025	"Attempt to chill was evident"

B-1.2 Quality assurance – blank samples

The groundwater QA samples collected during this sampling event were:

- **Rinsate blanks:** Rinsate blank samples are water samples collected from decontaminated, reused field equipment and were used primarily to assess whether the decontamination procedure was effective and if cross contamination has led to positive observations in subsequent samples. Rinsate samples were collected by pouring laboratory supplied rinsate water over reusable sampling equipment (e.g. interface probe) and collecting it in laboratory supplied containers. Rinsate samples were then transferred to a chilled cooler for sample preservation prior to and during transport to the testing laboratory.
- **Field blanks:** Field blank samples were used to estimate contamination of a sample during the collection procedure. Field blank samples were collected by pouring laboratory supplied rinsate water into laboratory supplied bottles onsite and sent to the laboratory for analysis along with other samples.

The blank samples collected and analysed as part of the quality assurance program are summarised in Table 3. The LOR applied to the blank samples (i.e standard or non-standard) are reflective of that which was applied to the primary samples on the day the blank sample was collected. On the days primary samples were analysed for ALS's "super ultra trace" LOR, ALS's "low level" LOR was completed on blank samples due to insufficient volume of water supplied to the laboratory to conduct "super ultra trace" on the blank samples. Although GHD field staff follow a decontamination procedure, GHD notes that cross contamination cannot be entirely precluded when different LORs have been used across blank and primary samples. A review of the primary samples analysed for "super ultra trace" indicates that PFAS concentrations are within historical ranges. It is further noted that all PFAS concentrations in the field, and rinsate blanks were below the LOR that were applied, indicating a low potential for cross-contamination that could materially impact the overall conclusions to have occurred. A summary of rinsate and field blanks

results is presented in Table 3. The tabulated blank sample results are shown in Table QB.1 in Attachment 1.

Table 3 Summary of rinsate and field t blanks

Lab report number	Sample type	Sample ID	Below LOR
EP2510792	Rinsate	0960_QC301_250623	Yes
		0960_QC302_250624	Yes
		0960_QC303_250625	Yes
		0960_QC304_250626	Yes
		0960_QC305_250627	Yes
		0960_QC306_250628	Yes
		0960_QC307_250629	Yes
		0960_QC308_250630	Yes
	Field blank	0960_QC401_250623	Yes
		0960_QC402_250624	Yes
		0960_QC403_250625	Yes
		0960_QC404_250626	Yes
		0960_QC405_25062	Yes
		0960_QC406_250628	Yes
		0960_QC407_250629	Yes
		0960_QC408_250630	Yes

B-1.3 Quality control – duplicate samples

The QC samples collected during the investigation were:

- **Blind duplicates:** Blind duplicate samples were used to identify the variation in the analyte concentration between samples from the same sampling point and the repeatability of the laboratory's analysis.
- **Split duplicates:** Split duplicate samples were used to provide an indication of the repeatability of the results between laboratories.

Field duplicate samples (blind and split) were collected in replicate bottles during sampling. The required analyses were performed by ALS Laboratory group (primary laboratory) and Eurofins (secondary laboratory), both of whom are NATA accredited.

B-1.3.1 Sample collection frequency

Based on the OMP (GHD 2019), one pair of duplicates (blind and split) was required to be collected and analysed per 10 primary PFAS samples. The frequency of groundwater duplicates collected for this assessment is summarised in Table 4 . It is noted that due to laboratory error, only 4 of the 5 collected blind duplicate sediment samples were analysed. Noting that RPDs calculated for sediment samples indicated acceptable precision (refer to Section B-1.3.2), this minor shortfall in collection frequency is not considered to materially impact the data quality.

Table 4 Summary of sample collection frequency

Matrix	Rate	Expected number of duplicate pairs	Number of blind duplicate samples collected	Number of split duplicate samples collected
Water	1 duplicate pair per 10 primary samples	10 (93 primary samples total taken)	11	11

Matrix	Rate	Expected number of duplicate pairs	Number of blind duplicate samples collected	Number of split duplicate samples collected
Sediment	1 duplicate pair per 10 primary samples	5 (46 primary samples total taken)	4	5

B-1.3.2 Relative percentage difference calculations

RPD calculations are used to assess how closely primary, blind duplicate and split duplicate sample results match. RPDs are a quantitative measure of the accuracy of the analytical results and are calculated in accordance with the procedure described in AS 4482.1 – 2005 (Standards Australia 2005). According to AS 4482.1 – 2005, typical RPDs are expected to range between 30% and 50%; however, this may be higher for organics and for low concentrations of analytes.

RPD results were considered acceptable if they were less than or equal to 30%. The only exception to this was when concentrations within the primary and blind or split sample were less than ten times the laboratory LOR. In this case, a greater RPD value is considered acceptable.

Where a result is reported below the laboratory LOR for one of the paired samples, the sample was assigned a concentration equal to the LOR for RPD calculation purposes. This is based on the consideration that the chemical may be present at a concentration just below the laboratory LOR or not present at all (i.e. the concentration is zero). Where both results are reported below laboratory LOR, the RPD is not calculated.

Water RPDs

For the water monitoring (including groundwater, surface water and seepage water) a total of 720 RPDs were calculated, and nine RPDs (i.e., 1.2%) exceeded the adopted (conservative) 30% RPD acceptable limit, where the primary and/or duplicate sample concentrations were greater than 10 times the laboratory LOR. 679 RPDs were expressed as zero as both the primary and duplicate/split sample concentrations were less than the laboratory LOR. A summary of these exceedances is detailed in Table 5 and full calculations are provided in Table QB.2 in Attachment 1.

The RPD values greater than the adopted threshold of 30% (where the primary and/or duplicate sample concentrations were greater than 10 times the applied LOR) are considered to have limited impact on the overall data quality given the low proportion of outliers relative to the wider dataset and noting the reported concentrations in the duplicate pairs were within the same order of magnitude.

Table 5 Summary of Water RPD exceedances

Primary & Duplicate Field IDs (type)	Analyte	RPD (%)	Primary Concentration	Duplicate Concentration	Concentrations less than 10 x the LOR?
0960_MW018_250623 / 0960_QC101_250623 (blind duplicate)	Perfluorononanoic acid (PFNA)	40	0.02	0.03	Yes
0960_MW018_250623 / 0960_QC201_250623 (split duplicate)	Perfluorobutane sulfonic acid (PFBS)	61	0.08	0.15	Yes
	Perfluoroheptane sulfonic acid (PFHpS)	46	0.05	0.08	Yes
	PFOS	86	0.52	1.3	No
	Perfluoropropanesulfonic acid (PFPrS)	86	0.02	0.05	Yes
	Perfluoropentane sulfonic acid (PFPeS)	67	0.08	0.16	Yes
	PFHxS	72	0.85	1.8	No

Primary & Duplicate Field IDs (type)	Analyte	RPD (%)	Primary Concentration	Duplicate Concentration	Concentrations less than 10 x the LOR?
	Perfluorobutanoic acid (PFBA)	50	1.2	2	No
	Perfluoroheptanoic acid (PFHpA)	31	4.11	5.6	No
	Perfluorohexanoic acid (PFHxA)	33	2.66	3.7	No
	PFNA	86	0.02	0.05	Yes
	PFOA	34	0.65	0.92	No
	PFAS (Sum of Total)	39	12.6	18.74	No
	Sum of PFHxS and PFOS	77	1.37	3.1	No
0960_MW104_250624 / 0960_QC202_250625 (split duplicate)	PFBS	67	0.02	0.04	Yes
	PFHxS	57	0.05	0.09	Yes
	PFAS (Sum of Total)	83	0.07	0.17	No
	Sum of PFHxS and PFOS	57	0.05	0.09	Yes
0960_OTH103_250630 / 0960_QC115_250630 (blind duplicate)	PFOS	37	0.0011	0.0016	Yes
	PFOA	32	0.0016	0.0022	Yes
	Sum of PFHxS and PFOS	37	0.0011	0.0016	Yes

Sediment RPDs

For the sediment monitoring, a total of 292 RPDs were calculated and a single RPD exceeded the adopted (conservative) 30% RPD acceptable limit.. 273 RPDs were expressed as zero as both the primary and duplicate/split sample concentrations were less than the laboratory LOR. A summary of the single RPD exceedance is detailed in Table 6 and full calculations are provided in Table QB.3 in Attachment 1.

Table 6 Summary of sediment RPD exceedances

Primary & Duplicate Field IDs (type)	Analyte	RPD (%)	Primary Concentration	Duplicate Concentration	Concentrations less than 10 x the LOR?
0960_SD199_250628 / 0960_QC109_250628 (blind duplicate)	Moisture (5)	43	13.9	9.0	No

B-2 Laboratory program

Laboratory QA/QC procedures and compliance during the investigation are summarised in Table 7, with exceptions detailed in the following subsections.

Table 7 Summary of Laboratory QA/QC compliance

QA/QC element	Requirement	Requirement adhered to?	Information/data acceptable?
NATA accreditation	Analysis of CoPC performed under NATA accreditation or equivalent government endorsed provider of accreditation.	Yes	Yes

QA/QC element	Requirement	Requirement adhered to?	Information/data acceptable?
Holding times	Laboratory to complete sample extraction and analysis of CoPC within method specifications.	Yes, with exceptions	Yes, see Section B-2.3.5.
Analytical methods	Sample analyses are to use appropriate methods for each CoPC with regard to Schedule B (3) of the ASC NEPM and in accordance with the laboratory's NATA accreditation.	Yes	Yes
Laboratory LORs	Laboratory LORs are below adopted assessment criteria.	Partially, as per SAQP	Yes
Laboratory QC results	No method blank, laboratory duplicates, laboratory controls, matrix spike or surrogate spike recovery outliers were identified. Sufficient quantities of laboratory QC analysis was undertaken.	Yes, with exceptions	Yes, see Section B.2-3.

B-2.1 Laboratory quality control procedures

Laboratory QC samples incorporated in the analytical process included:

- **Laboratory blind duplicates:** A laboratory blind duplicate provides data on the analytical precision and reproducibility of the analytical result. The laboratory blind duplicate is created by subsampling from one of the primary samples submitted for analysis. Laboratory blind duplicates are analysed at a rate equivalent to one in ten per analytical batch, or one sample per batch if less than 10 samples are analysed in a batch.
- **LCS:** The LCS analysis of either a reference material or a control matrix fortified with analytes representative of the analyte class. The purpose of LCS is to monitor method precision and accuracy independent of the sample matrix. Typically, the percentage recovery of the LCS is compared to the dynamic recovery limit based on the statistical analysis of the processed LCS analysis.
- **Matrix spikes:** Matrix spike sample analysis is the analysis of one or more replicate portions of samples from the batch, after fortifying the additional portion(s) with known quantities of the analyte(s) of interest. The percentage recovery of target analyte(s) from matrix spike samples is used to determine the bias of the method in the specific sample matrix.
- **Surrogate spikes:** Surrogate spikes provide a means of checking that no gross errors have occurred during any stage of the analytical method leading to significant analyte loss. Surrogate recoveries are similar to the analyte of interest in terms of chemical composition, extractability, and chromatographic conditions (retention time), but which are not normally found in environmental samples. Surrogate compounds are spiked into blanks, standards and samples submitted for organic analyses by gas-chromatographic techniques prior to sample extraction.
- **Method blanks:** Method or analysis blank sample analysis is the analysis of a sample that is as free as possible of the analytes of interest but has been prepared the same as the samples under investigation. The analysis is to ascertain if laboratory reagents, glassware and other laboratory consumables contribute to the observed concentration of analytes in the process batch. If below the maximum acceptable method blank (20% of the practical quantisation limit), the contribution is subtracted from the gross analytical signal for each analysis before calculating the sample analyte concentration. The method blank should return analyte concentrations as 'not detected'.

B-2.2 Laboratory quality control results

Laboratory quality control results were compared against criteria set by ALS Environmental and Eurofins, which are largely based on the ASC NEPM and US EPA (2006) methods. The individual testing laboratories conducted an assessment of the laboratory QC program internally; however, the results were also independently reviewed and assessed by GHD. All laboratory quality control measures were within the adopted acceptance criteria with the exception of those described in the subsections below.

The exceptions were limited and comprised a very small proportion of the large number of quality control measures completed for the investigation. Based on this, the exceptions described in the subsections below are not considered to significantly influence data quality.

B-2.3 QC sample frequency – outliers

All laboratory QC samples were tested with the expected frequency, except those summarised in Table 8. These outliers only represent a small portion of the internal lab QC program conducted. Therefore, these minor non-compliances reported for this investigation are not considered to have materially affected the conclusions of this report.

Table 8 QC sample frequency – outliers

Lab Report	QC sample type	Analytical Method	Method	Actual rate/expected rate (%)
EP2510792	Laboratory Duplicates	PFAS by liquid chromatography–mass spectrometry.	EP231X-LL	7.69/10.00
		PFAS by liquid chromatography–mass spectrometry.	EP231X	7.06/10.00
		PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	0.00/10.00
	Matrix Spikes	PFAS by liquid chromatography–mass spectrometry.	EP231X-LL	3.85/5.00
		PFAS by liquid chromatography–mass spectrometry.	EP231X	3.53/5.00
		PFAS by liquid chromatography–mass spectrometry.	EP231X-SUT	0.00/5.00

B-2.3.1 Matrix spike – outliers

All matrix spikes were of an acceptable recovery except for those summarised in Table 9. These outliers only represent a small portion of the internal lab QC program conducted and in some cases relate to anonymous samples (i.e., samples unrelated to the base or project). Therefore, these minor non-compliances are not considered to have materially affected the conclusions of this report.

Table 9 Matrix spike outliers

Lab Report	Sample ID	Analyte	Comment
EP2510792	0960_SD121_250623	PFOS	MS recovery not determined, background level greater than or equal to 4x spike level.
	0960_SD277_250625	PFOS	MS recovery not determined, background level greater than or equal to 4x spike level.
	0960_SD121_250623	Perfluorononane sulfonic acid (PFNS)	MS recovery not determined, background level greater than or equal to 4x spike level.
	Anonymous	PFOS	MS recovery not determined, background level greater than or equal to 4x spike level.
	Anonymous	Perfluoropentanoic acid (PFPeA)	MS recovery not determined, background level greater than or equal to 4x spike level.
	Anonymous	Perfluorohexanoic acid (PFHxA)	MS recovery not determined, background level greater than or equal to 4x spike level.
	Anonymous	Perfluoroheptanoic acid (PFHpA)	MS recovery not determined, background level greater than or equal to 4x spike level.

B-2.3.2 Laboratory control spike – outliers

All laboratory control spike outliers were of an acceptable recovery. No laboratory control spike outliers exist within the sampling event.

B-2.3.3 Surrogate recovery – outliers

All surrogate recovery outliers were of an acceptable recovery. No surrogate recovery outliers exist within the sampling event.

B-2.3.4 Duplicate – outliers

Samples were analysed and received acceptable RPDs with no outliers.

B-2.3.5 Holding time – outliers

Samples were analysed within appropriate holding times, excluding those outlines in Table 10. The holding time breaches are not considered to significantly impact the overall data quality as they do not relate to analytes that are critical to the project objectives (i.e., they are non-PFAS analytes).

Table 10 Holding time – outliers

Lab Report	Sample ID	Analyte	Days overdue
EP2510792	0960_SD121_250623	Moisture content (%)	4
	0960_SD123_250623		
	0960_SD122_250623		
	0960_SD219_250624		3
	0960_SD231_350624		
	0960_SD235_250624		
	0960_SD292_250624		
	0960_SD210_250624		
	0960_SD198_250624		
	0960_SD114_250624		
	0960_SD234_250624		
	0960_SD291_250624		
	0960_SD293_250624		
	0960_QC103_250624		
	0960_SD108_250625		2
	0960_SD124_250625		
	0960_SD157_250625		
	0960_SD168_250625		
	0960_SD174_250625		
	0960_SD189_250625		
	0960_SD265_250625		
	0960_SD278_250625		
	0960_QC104_250625		
	0960_SD113_250625		
	0960_SD125_250625		
	0960_SD166_250625		
	0960_SD170_250625		
	0960_SD176_250625		
	0960_SD243_250625		
	0960_SD279_250625		

Lab Report	Sample ID	Analyte	Days overdue
	0960_SD302_250625		
	0960_SD190_250626		1
	0960_SD193_250626		
	0960_QC107_250626		
	0960_SD192_250626		
	0960_SD288_250626		
	0960_QC109_250628		2

B-3 Data quality indicator evaluation

Table 11 Data quality indicator evaluation

		Acceptable?
Completeness	All locations that were proposed to be sampled were sampled where possible. Samples were analysed according to the OMP (GHD 2019).	Yes
	All field documentation is complete and correct, including chain of custody documentation for samples.	Yes
	Field forms and documentation capture all relevant important information.	Yes
	Samples were analysed within appropriate holding times.	Yes
	Appropriate laboratory limits of reporting for comparison to relevant assessment criteria.	Yes
Comparability	Standardised operating procedure for groundwater sampling was adhered to and is in line with relevant guidelines.	Yes
	Field staff were experienced in the sampling of groundwater and were appropriately trained.	Yes
	Consistent laboratory use with consistent analytical methods used.	Yes
	Climatic conditions consistent and considered representative of region.	Yes
Representativeness	Samples were collected in a uniform and consistent manner, therefore representative of the media in the field.	Yes
Precision	Sufficient quantities of field blind and split duplicates were collected to enable comparison within and between laboratories.	Yes
	Sufficient quantities of internal laboratory duplicates were analysed to enable comparison within laboratories.	Yes
	Relative percentage difference calculations show that a large majority of duplicate sample concentrations are within defined difference limits.	Yes
	Field equipment was calibrated by equipment supplier (Appendix G6).	Yes
Accuracy	Sufficient quantities of field blanks, rinsate blanks and transport blanks were collected and analysed, with no results indicating cross contamination.	Yes
	Sufficient quantities of internal laboratory method blanks, surrogate spikes and laboratory control samples were analysed to determine laboratory accuracy, with the large majority of samples within defined limits.	Yes

Based on the results of the evaluation of the QA/QC data described in the previous sections, the reported QA/QC non-compliances are not considered likely to significantly influence the reliability of the analytical data. It is further considered that:

- The field and laboratory quality assurance measures implemented provide a reasonable level of confidence that the data collected and reported is appropriately complete, comparable and representative.
- The field and laboratory quality control measures implemented provide a reasonable level of confidence that the data collected and reported is appropriately accurate and precise.
- The overall review of the QA/QC results indicates that the data collected for the investigation is of acceptable quality upon which to provide an adequate and reliable assessment of the property.

Attachment 1 – QA/QC Data Tables

Table QB.1	Blank results
Table QB.2	Relative Percentage Differences – Water
Table QB.3	Relative Percentage Differences – Sediment



Sample Type			Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Field ID			0960_QC401_250623	0960_QC402_250624	0960_QC403_250625	0960_QC404_250626	0960_QC405_250627	0960_QC406_250628	0960_QC407_250629	0960_QC408_250630
Date			23 Jun 2025	24 Jun 2025	26 Jun 2025	27 Jun 2025	27 Jun 2025	28 Jun 2025	29 Jun 2025	30 Jun 2025
Lab Report Number			EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR								
PFAS - Perfluoroalkyl Sulfonic Acids										
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorononane sulfonate (PFNS)	µg/L	0.02	<0.02	-	<0.02	-	-	<0.02	<0.02	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.02	<0.02	<0.01
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
PFAS - Perfluoroalkyl Carboxylic Acids										
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.1	<0.01	<0.1	<0.01	<0.01	<0.1	<0.1	<0.01
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	<0.005	-	<0.005	<0.005	-	-	<0.005
PFAS - Perfluoroalkyl Sulfonamide										
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
PFAS - Fluorotelomer Sulfonic Acids										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
PFAS - Sums										
PFAS (Sum of Total)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
PFAS (Sum of Total)(WA DER List)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
Sum of PFHxS and PFOS	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002



Sample Type			Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate
Field ID			0960_QC301_250623	0960_QC302_250624	0960_QC303_250625	0960_QC304_250626	0960_QC305_250627	0960_QC306_250628	0960_QC307_250629	0960_QC308_250630
Date			23 Jun 2025	24 Jun 2025	26 Jun 2025	27 Jun 2025	27 Jun 2025	28 Jun 2025	29 Jun 2025	30 Jun 2025
Lab Report Number			EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR								
PFAS - Perfluoroalkyl Sulfonic Acids										
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorononane sulfonate (PFNS)	µg/L	0.02	<0.02	-	<0.02	-	-	<0.02	<0.02	-
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.02	<0.02	<0.01
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
PFAS - Perfluoroalkyl Carboxylic Acids										
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.1	<0.01	<0.1	<0.01	<0.01	<0.1	<0.1	<0.01
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	<0.005	-	<0.005	<0.005	-	-	<0.005
PFAS - Perfluoroalkyl Sulfonamide										
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.002	<0.02	<0.002	<0.02	<0.002	<0.002	<0.02	<0.02	<0.002
PFAS - Fluorotelomer Sulfonic Acids										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.05	<0.005	<0.05	<0.005	<0.005	<0.05	<0.05	<0.005
PFAS - Sums										
PFAS (Sum of Total)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
PFAS (Sum of Total)(WA DER List)	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002
Sum of PFHxS and PFOS	µg/L	0.002	<0.01	<0.002	<0.01	<0.002	<0.002	<0.01	<0.01	<0.002



Location Code		0960_MW018	0960_MW018	RPD	0960_MW018	0960_MW018	RPD	0960_MW104	0960_MW104	RPD	0960_MW104	0960_MW104	RPD	0960_MW126	0960_MW126	RPD	0960_MW126	0960_MW126	RPD
Field ID		0960_MW018_250623	0960_QC101_250623		0960_MW018_250623	0960_QC201_250623		0960_MW104_250624	0960_QC102_250624		0960_MW104_250624	0960_QC202_250625		0960_MW126_250625	0960_QC105_250625		0960_MW126_250625	0960_QC205_250625	
Date		23 Jun 2025	23 Jun 2025		23 Jun 2025	23 Jun 2025		24 Jun 2025	24 Jun 2025		24 Jun 2025	24 Jun 2025		25 Jun 2025	25 Jun 2025		25 Jun 2025	25 Jun 2025	
Sample Type		Normal	Field D		Normal	Interlab D		Normal	Field D		Normal	Interlab D		Normal	Field D		Normal	Interlab D	
Matrix Type		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water	
Lab Report Number		EP2510792	EP2510792		EP2510792	1241100		EP2510792	EP2510792		EP2510792	1241100		EP2510792	EP2510792		EP2510792	1241100	
Unit		LOR																	
PFAS - Perfluoroalkyl Sulfonic Acids																			
Perfluorobutane sulfonic acid (PFBS)		µg/L	0.0005	0.08	0.07	13	0.08	0.15	61	0.02	0.02	0	0.02	0.04	67	<0.02	<0.02	0	<0.02
Perfluorodecanesulfonic acid (PFDS)		µg/L	0.0005	<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	<0.02
Perfluorononane sulfonate (PFNS)		µg/L	0.0005	<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	<0.02
Perfluoroheptane sulfonic acid (PFHpS)		µg/L	0.0005	0.05	0.06	18	0.05	0.06 ^{#1}	46	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02
Perfluorooctane sulfonic acid (PFOS)		µg/L	0.0001	0.52	0.54	4	0.52	1.3 ^{#1}	86	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01
Perfluoropropanesulfonic acid (PFPrS)		µg/L	0.001	0.02	<0.02	0	0.02	0.05	86	<0.02	<0.02	0	<0.02	0.02	0	<0.02	<0.02	0	<0.02
Perfluoropentane sulfonic acid (PFPeS)		µg/L	0.0005	0.08	0.10	22	0.08	0.16 ^{#1}	67	<0.02	<0.02	0	<0.02	0.02 ^{#1}	0	<0.02	<0.02	0	<0.02
Perfluorohexane sulfonic acid (PFHxS)		µg/L	0.0005	0.85	1.00	16	0.85	1.8 ^{#1}	72	0.05	0.05	0	0.05	0.09 ^{#1}	57	<0.01	<0.01	0	<0.01
PFAS - Perfluoroalkyl Carboxylic Acids																			
Perfluorobutanoic acid (PFBA)		µg/L	0.002	1.2	1.2	0	1.2	2.0	50	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1
Perfluorodecanoic acid (PFDA)		µg/L	0.0005	<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	<0.02
Perfluorododecanoic acid (PFDDoDA)		µg/L	0.0005	<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	<0.02
Perfluoroheptanoic acid (PFHpA)		µg/L	0.0005	4.11	4.56	10	4.11	5.6 ^{#1}	31	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02
Perfluorohexanoic acid (PFHxA)		µg/L	0.0005	2.66	2.87	8	2.66	3.7	33	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02
Perfluorononanoic acid (PFNA)		µg/L	0.0005	0.02	0.03	40	0.02	0.05	86	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02
Perfluorooctanoic acid (PFOA)		µg/L	0.0005	0.65	0.64	2	0.65	0.82 ^{#1}	34	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01
Perfluoropentanoic acid (PFPeA)		µg/L	0.0005	2.34	2.56	9	2.34	2.9	21	<0.02	<0.02	0	<0.02	<0.01	0	<0.02	<0.02	0	<0.02
Perfluorotetradecanoic acid (PFTeDA)		µg/L	0.0005	<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	<0.05
Perfluorotridecanoic acid (PFTriDA)		µg/L	0.0005	<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	<0.02
Perfluoroundecanoic acid (PFUnDA)		µg/L	0.0005	<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	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)		µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																			
N-Ethyl perfluorooctane sulfonamide (EtFOSA)		µg/L	0.001	<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
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)		µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		µg/L	0.001	<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
N-Methyl perfluorooctane sulfonamide (MeFOSA)		µg/L	0.001	<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
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)		µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)		µg/L	0.001	<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
Perfluorooctane sulfonamide (PFOSA)		µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.02	<0.02	0	<0.02
PFAS - Fluorotelomer Sulfonic Acids																			
4:2 Fluorotelomer sulfonic acid (4:2 FTS)		µg/L	0.001	<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	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)		µg/L	0.001	<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
8:2 Fluorotelomer sulfonic acid (8:2 FTS)		µg/L	0.001	<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	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)		µg/L	0.001	<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	<0.05
PFAS - Sums																			
PFAS (Sum of Total)		µg/L	0.0002	12.6	13.6	8	12.6	18.71	39	0.07	0.07	0	0.07	0.17	83	<0.01	<0.01	0	<0.1
PFAS (Sum of Total)(WA DER List)		µg/L	0.0002	12.4	13.4	8	12.4	18.37	39	0.07	0.07	0	0.07	0.13	60	<0.01	<0.01	0	<0.05
Sum of US EPA PFAS (PFOS + PFOA)*		µg/L	0.001	-	-	-	-	2.22	-	-	-	-	-	<0.01	-	-	-	-	<0.01
Sum of PFHxS and PFOS		µg/L	0.0002	1.37	1.54	12	1.37	3.1	77	0.05	0.05	0	0.05	0.09	57	<0.01	<0.01	0	<0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*		µg/L	0.001	-	-	-	-	4.02	-	-	-	-	-	0.09	-	-	-	-	<0.01

Comments
#1 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.

Location Code		0960_MW174	0960_MW174	RPD	0960_MW174	0960_MW174	RPD	0960_MW147	0960_MW147	RPD	0960_MW147	0960_MW147	RPD	0960_MW141	0960_MW141	RPD	0960_MW141	0960_MW141	RPD
Field ID		0960_MW174_250626	0960_QC106_250626		0960_MW174_250626	0960_QC206_250626		0960_MW147A_250627	0960_QC108_250627		0960_MW147A_250627	0960_QC208_250627		0960_MW141C_250629	0960_QC110_250629		0960_MW141C_250629	0960_QC210_250629	
Date		26 Jun 2025	26 Jun 2025		26 Jun 2025	26 Jun 2025		27 Jun 2025	27 Jun 2025		27 Jun 2025	27 Jun 2025		29 Jun 2025	29 Jun 2025		29 Jun 2025	29 Jun 2025	
Sample Type		Normal	Field D		Normal	Interlab D		Normal	Field D		Normal	Interlab D		Normal	Field D		Normal	Interlab D	
Matrix Type		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water	
Lab Report Number		EP2510792	EP2510792		EP2510792	1241100		EP2510792	EP2510792		EP2510792	1241100		EP2510792	EP2510792		EP2510792	1241100	
Unit		LOR																	
PFAS - Perfluoroalkyl Sulfonic Acids																			
Perfluorobutane sulfonic acid (PFBS)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.002	<0.002	0	<0.002	<0.001	0	<0.0005	<0.0005	0	<0.0005
Perfluorodecanesulfonic acid (PFDS)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.002	<0.002	0	<0.002	<0.001	0	<0.0005	<0.0005	0	<0.0005
Perfluorononane sulfonate (PFNS)		µg/L	0.0005	-	-	-	-	<0.001	-	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorooctane sulfonic acid (PFOS)		µg/L	0.0001	<0.002	0.002	0	<0.002	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.0002	<0.0002	0	<0.0001
Perfluoropropanesulfonic acid (PFPrS)		µg/L	0.001	<0.01	<0.01	0	<0.01	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0020	<0.0020	0	<0.001
Perfluoropentane sulfonic acid (PFPeS)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorohexane sulfonic acid (PFHxS)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.0005	<0.0005	0	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids																			
Perfluorobutanoic acid (PFBA)		µg/L	0.002	<0.01	<0.01	0	<0.01	<0.005	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.0020	<0.0020	0	<0.0020
Perfluorodecanoic acid (PFDA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorododecanoic acid (PFDDoDA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluoroheptanoic acid (PFHpA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005
Perfluorohexanoic acid (PFHxA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorononanoic acid (PFNA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorooctanoic acid (PFOA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluoropentanoic acid (PFPeA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorotetradecanoic acid (PFTeDA)		µg/L	0.0005	<0.005	<0.005	0	<0.005	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluorotridecanoic acid (PFTriDA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluoroundecanoic acid (PFUnDA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)		µg/L	0.005	<0.005	<0.005	0	<0.005	-	-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																			
N-Ethyl perfluorooctane sulfonamide (EtFOSA)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001
Perfluorooctane sulfonamide (PFOSA)		µg/L	0.0005	<0.002	<0.002	0	<0.002	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005
PFAS - Fluorotelomer Sulfonic Acids																			
4:2 Fluorotelomer sulfonic acid (4:2 FTS)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.001	<0.001	0	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	0.002	0.002	0	0.002
8:2 Fluorotelomer sulfonic acid (8:2 FTS)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.001	<0.001	0	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)		µg/L	0.001	<0.005	<0.005	0	<0.005	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.001	<0.001	0	<0.001
PFAS - Sums																			
PFAS (Sum of Total)		µg/L	0.0002	<0.002	0.002	0	<0.002	<0.005	0	<0.01	<0.01	0	<0.01	<0.1	0	0.0020	0.0020	0	0.0020
PFAS (Sum of Total)(WA DER List)		µg/L	0.0002	<0.002	0.002	0	<0.002	<0.005	0	<0.01	<0.01	0	<0.01	<0.05	0	0.0020	0.0020	0	0.0020
Sum of US EPA PFAS (PFOS + PFOA)*		µg/L	0.001	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-
Sum of PFHxS and PFOS		µg/L	0.0002	<0.002	0.002	0	<0.002	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.0002	<0.0002	0	<0.0002
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*		µg/L	0.001	-	-	-	-	<0.001	-	-	-	-	-	<0.01	-	-	-	-	<0.001

Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using



		Location Code		0960_SW205	0960_SW205			0960_SW205	0960_SW205			0960_MW159	0960_MW159			0960_MW159	0960_MW159			0960_OTH103	0960_OTH103			0960_OTH103	0960_OTH103			0960_OTH103	0960_OTH103			
		Field ID	Date	0960_SW205_250629	0960_QC111_250629			0960_SW205_250629	0960_QC211_250629			0960_MW159_250630	0960_QC112_250630			0960_MW159_250630	0960_QC212_250630			0960_OTH103_250630	0960_QC115_250630			0960_OTH103_250630	0960_QC215_250630			0960_OTH103_250630	0960_QC215_250630			
		Sample Type	Matrix Type	Normal	Field D			Normal	Interlab D			Normal	Field D			Normal	Interlab D			Normal	Field D			Normal	Interlab D			Normal	Interlab D			
		Lab Report Number		EP2510792	EP2510792	RPD		EP2510792	1241100	RPD		EP2510792	EP2510792	RPD		EP2510792	1241100	RPD		EP2510792	EP2510792	RPD		EP2510792	1241100	RPD		EP2510792	1241100	RPD		
		Unit	LOR																													
PFAS - Perfluoroalkyl Sulfonic Acids																																
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0
Perfluorononane sulfonate (PFNS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0	<0.0005	<0.001	0
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	<0.01	<0.01	0	<0.01	<0.0001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	0.0011	0.0016	37	0.0011	0.0011	0	0.0011	0.0011	0	0.0011	0.0011	0	0.0011	0.0011	0
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005	<0.01	<0.01	0	<0.01	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
PFAS - Perfluoroalkyl Carboxylic Acids																																
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.1	0	<0.1	<0.005	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0	<0.0020	<0.0020	0
Perfluorodecanoic acid (PFDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.005	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.05	0	0.0007	0.0008	13	0.0007	0.0007	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorooctanoic acid (PFHxA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorononanoic acid (PFNA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	0.0008	0.0010	22	0.0008	0.0008	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	<0.01	<0.01	0	<0.01	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	0.0016	0.0022	32	0.0016	0.0016	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005	<0.05	<0.05	0	<0.05	<0.001	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorotridecanoic acid (PFTriDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.001	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide																																
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.005	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.005	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.0005	<0.02	<0.02	0	<0.02	<0.005	0	<0.02	<0.02	0	<0.02	<0.02	0	<0.02	<0.05	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
PFAS - Fluorotelomer Sulfonic Acids																																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.001	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.001	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.001	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.01	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
PFAS - Sums																																
PFAS (Sum of Total)	µg/L	0.0002	<0.01	<0.01	0	<0.01	-	-	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	0.0042	0.0056	29	0.0042	-	-	-	-	-	-	-	-	-	-	-
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002	<0.01	<0.01	0	<0.01	<0.005	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.05	0	0.0034	0.0046	30	0.0034	-	-	-	-	-	-	-	-	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001	-	-	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sum of PFHxS and PFOS	µg/L	0.0002	<0.01	<0.01	0	<0.01	<0.001	0	<0.01																							

Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using



		Location Code		0960_SW208	0960_SW208	RPD	0960_SW208	0960_SW208	RPD	0960_MW175	0960_MW175	RPD	0960_MW175	0960_MW175	RPD
		Field ID	Date	0960_SW208_250630	0960_QC114_250630		0960_SW208_250630	0960_QC214_250630		0960_MW175A_250630	0960_QC116_250630		0960_MW175A_250630	0960_QC216_250630	
		Sample Type	Matrix Type	Normal	Field D		Normal	Interlab D		Normal	Field D		Normal	Interlab D	
		Water	Water	Water	Water		Water	Water		Water	Water		Water	Water	
		Lab Report Number		EP2510792	EP2510792		EP2510792	1241100		EP2510792	EP2510792		EP2510792	1241100	
		Unit	LOR												
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorononane sulfonate (PFNS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.01	<0.01	0	<0.01	<0.01	0	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001	<0.0020	<0.0020	0	<0.0020	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.0020	<0.0020	0	<0.0020	<0.005	0	<0.1	<0.1	0	<0.1	<0.05	0	
Perfluorodecanoic acid (PFDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorononanoic acid (PFNA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	
Perfluorotridecanoic acid (PFTriDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.02	<0.02	0	<0.02	<0.01	0	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide															
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.02	<0.02	0	<0.02	<0.05	0	
PFAS - Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.05	<0.05	0	<0.05	<0.05	0	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.05	<0.05	0	<0.05	<0.01	0	
PFAS - Sums															
PFAS (Sum of Total)	µg/L	0.0002	<0.0002	<0.0002	0	<0.0002	-	-	<0.01	<0.01	0	<0.01	<0.1	0	
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.01	<0.01	0	<0.01	<0.05	0	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001	-	-	-	-	<0.001	-	-	-	-	-	<0.01	-	
Sum of PFHxS and PFOS	µg/L	0.0002	<0.0002	<0.0002	0	<0.0002	<0.001	0	<0.01	<0.01	0	<0.01	<0.01	0	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001	-	-	-	-	<0.001	-	-	-	-	-	<0.01	-	

Comments
#1 Quantification of linear and branched isomers has been conducted as a single total response using



		Location Code		0960_SD292	0960_SD292		0960_SD292	0960_SD292		0960_SD168	0960_SD168		0960_SD168	0960_SD168	
		Field ID	0960_SD292_250624	0960_QC103_250624			0960_SD292_250624	0960_QC203_250625		0960_SD168_250625	0960_QC104_250625		0960_SD168_250625	0960_QC204_250625	
		Date	24 Jun 2025	24 Jun 2025			24 Jun 2025	24 Jun 2025		25 Jun 2025	25 Jun 2025		25 Jun 2025	25 Jun 2025	
		Sample Type	Normal	Field Duplicate			Normal	Interlab Split		Normal	Field Duplicate		Normal	Interlab Split	
		Matrix Type	Soil	Soil			Soil	Soil		Soil	Soil		Soil	Soil	
		Lab Report Number	EP2510792	EP2510792	RPD		EP2510792	1241100	RPD	EP2510792	EP2510792	RPD	EP2510792	1241100	RPD
	Unit	LOR													
Inorganics															
% Moisture	%	1	-	-	-	-	22	-	-	-	-	-	23	-	-
Moisture (%)	%	0.1	21.9	22.1	1	21.9	-	-	24.0	23.5	2	24.0	-	-	-
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0024	0.0030	22	0.0024	<0.005	0	0.0028	0.0029	4	0.0028	<0.005	0	0
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	0
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
PFAS - Perfluoroalkyl Sulfonamide															
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	0
PFAS - Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.01	0	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	0
PFAS - Sums															
PFAS (Sum of Total)	mg/kg	0.0002	0.0024	0.0030	22	0.0024	<0.05	0	0.0028	0.0029	4	0.0028	<0.05	0	0
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	0.0024	0.0030	22	0.0024	<0.01	0	0.0028	0.0029	4	0.0028	<0.01	0	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-
Sum of PFHxS and PFOS	mg/kg	0.0002	0.0024	0.0030	22	0.0024	<0.005	0	0.0028	0.0029	4	0.0028	<0.005	0	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))
***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



Location Code		0960_SD193	0960_SD193	RPD	0960_SD193	0960_SD193	RPD	0960_SD199	0960_SD199	RPD	0960_SD199	0960_SD199	RPD	0960_SD208	0960_SD208	RPD	
Field ID		0960_SD193_250626	0960_QC107_250626		0960_SD193_250626	0960_QC207_250626		0960_SD199_250628	0960_QC109_250628		0960_SD199_250628	0960_QC209_250628		0960_SD208_250630	0960_QC213_250630		
Date		26 Jun 2025	26 Jun 2025		26 Jun 2025	26 Jun 2025		28 Jun 2025	28 Jun 2025		28 Jun 2025	28 Jun 2025		30 Jun 2025	30 Jun 2025		
Sample Type		Normal	Field Duplicate		Normal	Interlab Split		Normal	Field Duplicate		Normal	Interlab Split		Normal	Interlab Split		
Matrix Type		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		
Lab Report Number		EP2510792	EP2510792	RPD	EP2510792	1241100	RPD	EP2510792	EP2510792	RPD	EP2510792	1241100	RPD	EP2510792	1241100	RPD	
	Unit	LOR															
Inorganics																	
% Moisture	%	1	-	-	-	-	40	-	-	-	-	14	-	-	20	-	
Moisture (%)	%	0.1	34.2	41.8	20	34.2	-	-	13.9	9.0	43	13.9	-	19.9	-	-	
PFAS - Perfluoroalkyl Sulfonic Acids																	
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0004	0.0003	29	0.0004	<0.005	0	0.0007	0.0006	15	0.0007	<0.005	0	<0.0002	<0.005	0
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	<0.005	-	-	<0.005	-	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
PFAS - Perfluoroalkyl Carboxylic Acids																	
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.001	0	<0.001	<0.005	0	<0.001	<0.005	0
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
PFAS - Perfluoroalkyl Sulfonamide																	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.01	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.0002	0	<0.0002	<0.01	0	<0.0002	<0.01	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.0002	0	<0.0002	<0.005	0	<0.0002	<0.005	0
PFAS - Fluorotelomer Sulfonic Acids																	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.01	0	<0.0005	<0.0005	0	<0.0005	<0.01	0	<0.0005	<0.01	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.0005	0	<0.0005	<0.005	0	<0.0005	<0.005	0
PFAS - Sums																	
PFAS (Sum of Total)	mg/kg	0.0002	0.0004	0.0003	29	0.0004	<0.05	0	0.0007	0.0006	15	0.0007	<0.05	0	<0.0002	<0.05	0
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	0.0004	0.0003	29	0.0004	<0.01	0	0.0007	0.0006	15	0.0007	<0.01	0	<0.0002	<0.01	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-	<0.005	-
Sum of PFHxS and PFOS	mg/kg	0.0002	0.0004	0.0003	29	0.0004	<0.005	0	0.0007	0.0006	15	0.0007	<0.005	0	<0.0002	<0.005	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	<0.005	-	-	-	-	-	<0.005	-	-	<0.005	-

*RPDs have only been considered where a concentration is greater than 1 times the RPD
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs 10 times the RPD)
***Interlab Duplicates are matched on a per compound basis as methods vary between labs

Appendix C

Results tables

Page 1 of 1



Field Parameters									
			pH (Field)	Electrical conductivity (field)	Dissolved Oxygen (Field)	Redox (Field)	Temperature (Field)	TDS (Field)	
			pH units	µS/cm	mg/L	mV	°C	mg/L	
Location Code	Date	Sampling Method							Sample Comments
0960_OTH103	30 Jun 2025	No purge/grab	7.91	51,883	4.65	32.5	20.5	33,723	Pale brown, moderate turbidity, low sediment load, no odour, no sheen
0960_OTH106	29 Jun 2025	No purge/grab	8.01	51,806	6.06	37	20.9	33,667	Colourless, low turbidity, no sediment, no odour, no sheen, subterranean fauna
0960_OTH107	29 Jun 2025	No purge/grab	8.1	51,033	4.3	50.2	21	33,181	Colourless, low turbidity, no sediment, no odour, no sheen, meiofauna present
0960_OTH129	30 Jun 2025	No purge/grab	8.13	50,745	4.75	34.4	19.6	32,990	Pale green, moderate turbidity, high sediment load, no odour, no sheen
0960_OTH132	30 Jun 2025	No purge/grab	8.14	50,651	5.64	28.2	20.9	32,977	Pale yellow-brown, moderate turbidity, moderate sediment load, no odour, no sheen
0960_OTH134	30 Jun 2025	No purge/grab	8.11	50,734	5.47	22.2	21.8	32,990	Pale yellow-brown, moderate turbidity, moderate sediment load, no odour, no sheen



Location Code	Date	Sampling Method	Field Parameters						Sample Comments
			pH (Field)	Electrical conductivity (field)	Dissolved Oxygen (Field)	DO (%S) (Field)	Redox (Field)	Temperature (Field)	
			pH units	µS/cm	mg/L	%S	mV	°C	
0960_SW001	29 Jun 2025	Grab	8.17	58,688	7.13	104	9	22.9	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW108	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW113	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW114	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW121	23 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW122	23 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW123	23 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW124	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW125	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW157	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW166	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW168	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW170	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW174	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW176	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW189	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW190	26 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW192	26 Jun 2025	Grab	7.59	75,195	3.54	57.4	-57.1	26.5	Pale yellow, moderate turbidity, no odour, no sheen, low sediment load, water running through sediment
0960_SW193	26 Jun 2025	Grab	7.81	64,713	0.72	10.3	-81.3	19.8	Yellow/brown, moderate turbidity, no odour, no sheen, taken from crab hole, water running through sediment
0960_SW198	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW199	28 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW200	28 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW205	29 Jun 2025	Grab	8.13	63,353	5.42	79.1	36.4	21.7	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW207	28 Jun 2025	Grab	7.77	68,339	6.32	95.9	36.4	22.2	Pale yellow, moderate turbidity, mod sediment load, no odour, no sheen
0960_SW208	30 Jun 2025	Grab	8.19	49,231	6.93	91.2	19.7	19.4	Pale green, low turbidity, no sediment, no odour, no sheen
0960_SW209	27 Jun 2025	Grab	7.91	71,260	5.14	79.9	4.3	23.3	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW210	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW211	27 Jun 2025	Grab	8	72,228	3.7	60.3	5.9	26	Very pale yellow-brown, low turbidity, low sediment load, no odour, no sheen, sediment/silt on top
0960_SW219	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW227	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW231	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW234	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW235	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW243	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW265	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW277	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW278	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW279	25 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW288	26 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW291	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW292	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW293	24 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW298	28 Jun 2025	-	-	-	-	-	-	-	Dry
0960_SW300	29 Jun 2025	Grab	8.06	61,160	5.5	79.3	22.5	21.5	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW301	28 Jun 2025	Grab	7.85	65,259	5.46	84	54	24.2	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW302	25 Jun 2025	Grab	7.95	71,289	5.33	82.9	4.6	23.5	Pale yellow/green, no odour, no sheen
0960_SW303	29 Jun 2025	Grab	8.07	51,643	5.64	74.7	30.2	19.5	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW304	29 Jun 2025	Grab	8.12	53,022	6.59	87.3	33.4	20.6	Pale yellow, low turbidity, low sediment load, no odour, no sheen
0960_SW305	27 Jun 2025	Grab	8.05	57,597	6.16	87.2	-2.8	21.2	Pale yellow, low turbidity, low sediment load, no odour, no sheen



Monitoring Zone					Source Area - Maintenance Area									
Location Code					0960_MW018	0960_MW018	0960_MW018	0960_MW021	0960_MW112	0960_MW113	0960_MW114	0960_MW115	0960_MW162	0960_MW164
Sample Type					Normal	Field Duplicate	Interlab Split	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Field ID					0960_MW018_250623	0960_QC101_250623	0960_QC201_250623	0960_MW021_250623	0960_MW112_250623	0960_MW113_250623	0960_MW114_250623	0960_MW115_250625	0960_MW162_250623	0960_MW164_250623
Date					23 Jun 2025	23 Jun 2025	23 Jun 2025	23 Jun 2025	23 Jun 2025	23 Jun 2025	23 Jun 2025	25 Jun 2025	23 Jun 2025	23 Jun 2025
Lab Report Number					EP2510792	EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)									
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	0.08	0.07	0.15	0.18	0.03	<0.02	<0.02	0.22	0.07
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		0.05	0.06	0.08 ^{#1}	<0.02	<0.02	<0.02	<0.02	0.05	0.03
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.52	0.54	1.3 ^{#1}	0.57	0.44	<0.01	<0.01	0.43	0.32
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		0.02	<0.02	0.05	0.04	<0.02	<0.02	<0.02	0.06	0.02
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		0.08	0.10	0.16 ^{#1}	0.16	0.03	<0.02	<0.02	0.21	0.08
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	0.85	1.00	1.8 ^{#1}	1.20	0.35	<0.01	<0.01	1.65	0.64
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		1.2	1.2	2.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		4.11	4.56	5.6 ^{#1}	0.04	<0.02	<0.02	<0.02	0.04	0.03
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		2.66	2.87	3.7	0.33	0.07	<0.02	<0.02	0.43	0.19
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		0.02	0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	0.65	0.64	0.92 ^{#1}	0.02	<0.01	<0.01	<0.01	0.05	0.03
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		2.34	2.56	2.9	0.10	<0.02	<0.02	<0.02	0.08	0.06
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide														
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PFAS - Sums														
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		12.6	13.6	18.71	2.64	0.92	<0.01	<0.01	3.20	2.11
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		12.4	13.4	18.37	2.44	0.89	<0.01	<0.01	2.88	1.98
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	-	2.22	-	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L			0.0002		1.37	1.54	3.1	1.77	0.79	<0.01	<0.01	2.08	1.60
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	-	4.02	-	-	-	-	-	-

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



Monitoring Zone					Source Area - Fuel Farm										
Location Code					0960_MW165	0960_MW166	0960_MW167	0960_MW168	0960_MW211	0960_MW233	0960_MW105	0960_MW148D	0960_MW148S	0960_MW151	0960_MW159
Sample Type					Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Field ID					0960_MW165_250623	0960_MW166_250623	0960_MW167_250623	0960_MW168_250623	0960_MW211_250623	0960_MW233_250623	0960_MW105_250624	0960_MW148D_250623	0960_MW148S_250623	0960_MW151_250630	0960_MW159_250630
Date					23 Jun 2025	23 Jun 2025	23 Jun 2025	25 Jun 2025	23 Jun 2025	23 Jun 2025	24 Jun 2025	23 Jun 2025	23 Jun 2025	30 Jun 2025	30 Jun 2025
Lab Report Number					EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)										
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	0.04	0.03	0.06	0.14	0.09	0.26	0.87	6.50	0.14
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	0.22	0.35	0.02	0.24	1.77	0.24
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.02	0.16	0.46	0.14	9.96	1.10	0.07	1.41	8.52	4.61
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	<0.02	<0.02	<0.02	0.04	0.02	0.06	0.29	2.44	0.03
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	0.03	0.04	0.06	0.09	0.27	0.55	4.46	0.27	<0.02
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	0.21	0.41	0.54	2.49	1.04	1.28	2.57	26.4	5.20
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1	0.2	2.2	0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	0.48	0.15	<0.02	0.11	0.03	0.02	0.10	0.92	0.15
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	0.36	0.17	0.15	0.49	0.20	0.31	0.94	14.3	0.91
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	0.04	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	0.40	0.22	0.02	0.23	0.12	0.02	0.18	1.38	0.21
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	0.47	0.12	0.04	0.27	0.09	0.06	0.22	3.29	0.35
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide															
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PFAS - Sums															
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		0.02	2.39	1.62	1.01	14.3	3.13	2.37	7.57	72.2	12.2
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		0.02	2.32	1.56	0.95	13.9	2.67	2.02	6.49	63.5	11.7
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	-	-	-	-	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L			0.0002		0.02	0.37	0.87	0.68	12.4	2.14	1.35	3.98	34.9	9.81
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	-	-	-	-	-	-	-	-	-

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



					Monitoring Zone		Pathway (northern, central and southern drainage chan											
					Location Code		0960_MW159	0960_MW159	0960_MW102	0960_MW103	0960_MW104	0960_MW104	0960_MW104	0960_MW122	0960_MW124	0960_MW126	0960_MW126	
					Sample Type		Field Duplicate	Interlab Split	Normal	Normal	Normal	Field Duplicate	Normal	Interlab Split	Normal	Normal	Field Duplicate	
					Field ID		0960_QC112_250630	0960_QC212_250630	0960_MW102_250625	0960_MW103_250624	0960_MW104_250624	0960_QC102_250624	0960_QC202_250625	0960_MW122_250624	0960_MW124_250625	0960_MW126_250625	0960_QC105_250625	
					Date		30 Jun 2025	30 Jun 2025	25 Jun 2025	24 Jun 2025	24 Jun 2025	24 Jun 2025	24 Jun 2025	24 Jun 2025	25 Jun 2025	25 Jun 2025	25 Jun 2025	
					Lab Report Number		EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)													
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	<0.01	<0.02	0.16	0.02	0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	<0.01	<0.02	0.06	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	0.07	<0.02	<0.02	0.02 ^{PI}	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	<0.01	<0.01	0.22	0.05	0.05	0.09 ^{PI}	<0.01	<0.01	<0.01	<0.01	<0.01	
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	0.04	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide																		
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)																		
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)																		
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	
PFAS - Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<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 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	
PFAS - Sums																		
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.01	<0.1	<0.01	0.57	0.07	0.07	0.17	<0.01	<0.01	<0.01	<0.01	<0.01	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.01	<0.05	<0.01	0.44	0.07	0.07	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	<0.01	-	-	-	-	<0.01	-	-	-	-	-	
Sum of PFHxS and PFOS	µg/L			0.0002		<0.01	<0.01	<0.01	0.22	0.05	0.05	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	<0.01	-	-	-	-	0.09	-	-	-	-	-	

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



					Monitoring Zone											
					Location Code	0960_MW126	0960_MW127	0960_MW134	0960_MW135	0960_MW139	0960_MW140	0960_MW143	0960_MW144	0960_MW145	0960_MW146	0960_MW147
					Sample Type	Interlab Split	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
					Field ID	0960_QC205_250625	0960_MW127_250625	0960_MW134_250625	0960_MW135A_250626	0960_MW139_250624	0960_MW140A_250628	0960_MW143A_250627	0960_MW144A_250626	0960_MW145A_250628	0960_MW146A_250627	0960_MW147A_250627
					Date	25 Jun 2025	25 Jun 2025	25 Jun 2025	26 Jun 2025	24 Jun 2025	28 Jun 2025	27 Jun 2025	26 Jun 2025	28 Jun 2025	27 Jun 2025	27 Jun 2025
					Lab Report Number	1241100	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)											
PFAS - Perfluoroalkyl Sulfonic Acids																
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFAS - Perfluoroalkyl Carboxylic Acids																
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
PFAS - Fluorotelomer Sulfonic Acids																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PFAS - Sums																
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		<0.01	-	-	-	-	-	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L			0.0002		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		<0.01	-	-	-	-	-	-	-	-	-	-

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



					Monitoring Zone	Pathway (northern, central and southern drainage channels)											
					Location Code	0960_MW147	0960_MW147	0960_MW170	0960_MW172	0960_MW175	0960_MW175	0960_MW175	0960_MW180	0960_MW181	0960_MW137	0960_MW137	
					Sample Type	Field Duplicate	Interlab Split	Normal	Normal	Normal	Field Duplicate	Interlab Split	Normal	Normal	Normal	Normal	
					Field ID	0960_QC108_250627	0960_QC208_250627	0960_MW170_250625	0960_MW172_250626	0960_MW175A_250630	0960_QC116_250630	0960_QC216_250630	0960_MW180A_250628	0960_MW181A_250628	0960_MW137A_250624	0960_MW137B_250624	
					Date	27 Jun 2025	27 Jun 2025	25 Jun 2025	26 Jun 2025	30 Jun 2025	30 Jun 2025	30 Jun 2025	28 Jun 2025	28 Jun 2025	24 Jun 2025	24 Jun 2025	
					Lab Report Number	EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)												
PFAS - Perfluoroalkyl Sulfonic Acids																	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.02	<0.01	0.03	0.89	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	0.54	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.01	<0.01	0.02	4.25	<0.01	<0.01	<0.01	<0.01	<0.01	0.0008	0.0030	
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.02	<0.01	<0.02	0.32	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0020	<0.0020	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	0.04	1.30	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.01	<0.01	0.35	10.6	<0.01	<0.01	<0.01	<0.01	<0.01	0.0010	0.0011	
PFAS - Perfluoroalkyl Carboxylic Acids																	
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.1	<0.05	<0.1	0.3	<0.1	<0.1	<0.05	<0.1	<0.1	<0.0020	<0.0020	
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	0.33	<0.02	<0.02	<0.05	<0.02	<0.02	<0.0005	<0.0005	
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	0.02	2.71	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.01	<0.01	0.01	0.52	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	0.76	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.0005	<0.0005	
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-	-	-	
PFAS - Perfluoroalkyl Sulfonamide																	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.02	<0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.0005	<0.0005	
PFAS - Fluorotelomer Sulfonic Acids																	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.001	<0.001	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.001	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.001	<0.001	
PFAS - Sums																	
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.01	<0.1	0.47	22.5	<0.01	<0.01	<0.1	<0.01	<0.01	0.0018	0.0041	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.01	<0.05	0.43	20.4	<0.01	<0.01	<0.05	<0.01	<0.01	0.0018	0.0041	
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	<0.01	-	-	-	-	<0.01	-	-	-	-	
Sum of PFHxS and PFOS	µg/L			0.0002		<0.01	<0.01	0.37	14.8	<0.01	<0.01	<0.01	<0.01	<0.01	0.0018	0.0041	
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	<0.01	-	-	-	-	<0.01	-	-	-	-	

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



Monitoring Zone					Receptor (Wapet Creek)											
Location Code					0960_MW137	0960_MW137	0960_MW141	0960_MW141	0960_MW141	0960_MW141	0960_MW141	0960_MW141	0960_MW141	0960_MW176	0960_MW176	0960_MW176
Sample Type					Normal	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Interlab Split	Normal	Normal	Normal	
Field ID					0960_MW137C_250624	0960_MW137D_250624	0960_MW141A_250629	0960_MW141B_250629	0960_MW141C_250629	0960_MW141D_250629	0960_QC110_250629	0960_QC210_250629	0960_MW176A_250629	0960_MW176B_250629	0960_MW176C_250629	
Date					24 Jun 2025	24 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	
Lab Report Number					EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	1241100	EP2510792	EP2510792	EP2510792
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)											
PFAS - Perfluoroalkyl Sulfonic Acids																
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	0.0052	0.0049	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0001	<0.0002	<0.0002	0.0018
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.001	<0.0020	<0.0020	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	0.0013	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	0.0010
PFAS - Perfluoroalkyl Carboxylic Acids																
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.005	<0.0020	<0.0020	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015	<0.0005	<0.005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005
PFAS - Fluorotelomer Sulfonic Acids																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		0.001	0.002	<0.001	<0.001	0.002	0.004	0.002	<0.005	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PFAS - Sums																
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		0.0075	0.0077	<0.0002	<0.0002	0.0020	0.0058	0.0020	-	<0.0002	<0.0002	0.0028
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		0.0075	0.0077	<0.0002	<0.0002	0.0020	0.0058	0.0020	<0.005	<0.0002	<0.0002	0.0028
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	-	-	-	-	-	-	<0.001	-	-	-
Sum of PFHxS and PFOS	µg/L			0.0002		0.0065	0.0057	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.001	<0.0002	<0.0002	0.0028
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	-	-	-	-	-	-	<0.001	-	-	-

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



Monitoring Zone					Receptor (Wapet Creek)											
Location Code					0960_MW177	0960_MW177	0960_MW177	0960_MW177	0960_MW178	0960_MW178	0960_MW178	0960_MW178	0960_MW179	0960_MW179	0960_MW179	0960_MW179
Sample Type					Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Field ID					0960_MW177A_250629	0960_MW177B_250629	0960_MW177C_250629	0960_MW177D_250629	0960_MW178A_250627	0960_MW178B_250627	0960_MW178C_250627	0960_MW178D_250627	0960_MW179A_250628	0960_MW179B_250628	0960_MW179C_250628	0960_MW179C_250628
Date					29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	27 Jun 2025	27 Jun 2025	27 Jun 2025	27 Jun 2025	27 Jun 2025	28 Jun 2025	28 Jun 2025	28 Jun 2025
Lab Report Number					EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)											
PFAS - Perfluoroalkyl Sulfonic Acids																
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.0002	0.0006	0.0006	0.0029	<0.0002	<0.0002	<0.0002	0.0016	0.0002	0.0003	0.0003
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.0005	0.0006	0.0007	0.0014	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids																
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0031	<0.0020	<0.0020	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	-	-	-	-	-	-	-	-	-	-
PFAS - Perfluoroalkyl Sulfonamide																
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PFAS - Fluorotelomer Sulfonic Acids																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PFAS - Sums																
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.0002	0.0012	0.0013	0.0043	<0.0002	<0.0002	<0.0002	0.0028	0.0033	0.0003	0.0003
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.0002	0.0012	0.0013	0.0043	<0.0002	<0.0002	<0.0002	0.0028	0.0033	0.0003	0.0003
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	-	-	-	-	-	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L			0.0002		<0.0002	0.0012	0.0013	0.0043	<0.0002	<0.0002	<0.0002	0.0028	0.0002	0.0003	0.0003
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



Monitoring Zone					Additional Wells										
Location Code					0960_MW179	0960_MW227	0960_MW228	0960_MW229	0960_MW230	0960_MW239	0960_MW222	0960_MW132	0960_MW174	0960_MW174	0960_MW174
Sample Type					Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Interlab Split
Field ID					0960_MW179D_250628	0960_MW227_250624	0960_MW228_250627	0960_MW229_250624	0960_MW230_250624	0960_MW239A_250625	0960_MW222_250630	0960_MW132_250626	0960_MW174_250626	0960_QC106_250626	0960_QC206_250626
Date					28 Jun 2025	25 Jun 2025	27 Jun 2025	25 Jun 2025	25 Jun 2025	25 Jun 2025	30 Jun 2025	26 Jun 2025	26 Jun 2025	26 Jun 2025	26 Jun 2025
Lab Report Number					EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	1241100
	Unit	LOR (standard)	LOR (low level)	LOR (super ultra trace)	ADWG 2011 Health (v4.0 updated June 2025)										
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	0.002	0.0005	1	<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	0.013	<0.002	<0.002	<0.001
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluorononane sulfonate (PFNS)	µg/L	0.02		0.0005		<0.0005	-	-	-	-	<0.02	-	-	-	<0.001
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.002	0.0001	0.008	<0.0002	<0.002	<0.002	<0.002	<0.002	0.20	0.013	<0.002	<0.002	<0.001
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.02	0.01	0.001		<0.0020	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.001
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.001
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.002	0.0005	0.03	<0.0005	<0.002	<0.002	<0.002	<0.002	0.11	0.014	<0.002	<0.002	<0.001
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	0.1	0.01	0.002		<0.0020	<0.01	<0.01	<0.01	<0.01	<0.1	0.02	<0.01	<0.01	<0.005
Perfluorodecanoic acid (PFDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.005
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluorononanoic acid (PFNA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.002	0.0005	0.2	<0.0005	<0.002	<0.002	<0.002	<0.002	0.02	<0.002	<0.002	<0.002	<0.001
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	0.005	0.0005		<0.0005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	0.002	0.0005		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.02	<0.002	<0.002	<0.002	<0.001
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L		0.005	0.005		-	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-
PFAS - Perfluoroalkyl Sulfonamide															
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	0.005	0.001		<0.001	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005
PFAS - Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	0.005	0.001		<0.001	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.001
PFAS - Sums															
PFAS (Sum of Total)	µg/L	0.01	0.002	0.0002		<0.0002	<0.002	<0.002	<0.002	<0.002	0.33	0.063	<0.002	<0.002	<0.005
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	0.002	0.0002		<0.0002	<0.002	<0.002	<0.002	<0.002	0.33	0.060	<0.002	<0.002	<0.005
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.002	0.001		-	-	-	-	-	-	-	-	-	<0.001
Sum of PFHxS and PFOS	µg/L			0.0002		<0.0002	<0.002	<0.002	<0.002	<0.002	0.31	0.027	<0.002	<0.002	<0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L			0.001		-	-	-	-	-	-	-	-	-	<0.001

Environmental Standards
NHMRC, June 2025, ADWG 2011 Health (v4.0 updated June 2025)



				Monitoring Zone	Receptor (Exmouth Gulf)							
				Location Code	0960_OTH103	0960_OTH103	0960_OTH103	0960_OTH106	0960_OTH107	0960_OTH129	0960_OTH132	0960_OTH134
				Sample Type	Normal	Field Duplicate	Interlab Split	Normal	Normal	Normal	Normal	Normal
				Field ID	0960_OTH103_250630	0960_QC115_250630	0960_QC215_250630	0960_OTH106_250629	0960_OTH107_250629	0960_OTH129_250630	0960_OTH132_250630	0960_OTH134_250630
				Date	30 Jun 2025	30 Jun 2025	30 Jun 2025	29 Jun 2025	29 Jun 2025	30 Jun 2025	30 Jun 2025	30 Jun 2025
				Lab Report Number	EP2510792	EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR	PFAS NEMP 3.0 2025 Interim marine 99%	PFAS NEMP 3.0 2025 Recreational water quality								
PFAS - Perfluoroalkyl Sulfonic Acids												
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0001	0.00023	2	0.0011	0.0016	0.0011	0.0037	0.0003	<0.0002	0.0002	0.0005
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.001			<0.0020	<0.0020	<0.001	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0005		2	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids												
Perfluorobutanoic acid (PFBA)	µg/L	0.002			<0.0020	<0.0020	<0.005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005			0.0007	0.0008	<0.005	0.0011	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	0.0005			0.0008	0.0010	<0.001	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	0.0005	19	10	0.0016	0.0022	0.002	0.0034	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTTrDA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PFAS - Perfluoroalkyl Sulfonamide												
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PFAS - Fluorotelomer Sulfonic Acids												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PFAS - Sums												
PFAS (Sum of Total)	µg/L	0.0002			0.0042	0.0056	-	0.0087	0.0003	<0.0002	0.0002	0.0005
PFAS (Sum of Total)(WA DER List)	µg/L	0.0002			0.0034	0.0046	<0.005	0.0082	0.0003	<0.0002	0.0002	0.0005
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001			-	-	0.0031	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L	0.0002		2	0.0011	0.0016	0.0011	0.0037	0.0003	<0.0002	0.0002	0.0005
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001			-	-	0.0031	-	-	-	-	-

Environmental Standards

HEPA, March 2025, PFAS NEMP 3.0 2025 Interim marine 99%
HEPA, March 2025, PFAS NEMP 3.0 2025 Recreational water quality



Monitoring Zone						Drainage Channels					Wapet Creek				
Location Code						0960_SW192	0960_SW193	0960_SW300	0960_SW301	0960_SW302	0960_SW001	0960_SW205	0960_SW205	0960_SW207	
Sample Type						Normal	Normal	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Interlab Split	Normal
Field ID						0960_SW192_250626	0960_SW193_250626	0960_SW300_250629	0960_SW301_250628	0960_SW302_250625	0960_SW001_250629	0960_SW205_250629	0960_QC111_250629	0960_QC211_250629	0960_SW207_250628
Date						26 Jun 2025	26 Jun 2025	29 Jun 2025	28 Jun 2025	25 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	29 Jun 2025	28 Jun 2025
Lab Report Number						EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	1241100	EP2510792
	Unit	LOR (standard)	LOR (super ultra trace)	PFAS NEMP 3.0 2025 Interim marine 99%	PFAS NEMP 3.0 2025 Recreational water quality										
PFAS - Perfluoroalkyl Sulfonic Acids															
Perfluorobutane sulfonic acid (PFBS)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorodecanesulfonic acid (PFDS)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorononane sulfonate (PFNS)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorooctane sulfonic acid (PFOS)	µg/L	<0.01	0.0001	0.00023	2	0.0053	0.02	<0.01	0.0003	0.02	<0.01	<0.01	<0.01	<0.0001	<0.01
Perfluoropropanesulfonic acid (PFPrS)	µg/L	<0.02	0.001			<0.0020	<0.02	<0.02	<0.0020	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluoropentane sulfonic acid (PFPeS)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorohexane sulfonic acid (PFHxS)	µg/L	<0.01	0.0005		2	<0.0005	<0.01	<0.01	<0.0005	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
PFAS - Perfluoroalkyl Carboxylic Acids															
Perfluorobutanoic acid (PFBA)	µg/L	<0.1	0.002			<0.0080 ^{#1}	<0.1	<0.1	<0.0020	<0.1	<0.1	<0.1	<0.1	<0.005	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02
Perfluorohexanoic acid (PFHxA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorononanoic acid (PFNA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	<0.01	0.0005	19	10	<0.0005	<0.01	<0.01	<0.0005	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	<0.02	0.0005			<0.0018 ^{#1}	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluorotetradecanoic acid (PFTeDA)	µg/L	<0.05	0.0005			<0.0005	<0.05	<0.05	<0.0005	<0.05	<0.05	<0.05	<0.05	<0.001	<0.05
Perfluorotridecanoic acid (PFTriDA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02
PFAS - Perfluoroalkyl Sulfonamide															
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
Perfluorooctane sulfonamide (PFOSA)	µg/L	<0.02	0.0005			<0.0005	<0.02	<0.02	<0.0005	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02
PFAS - Fluorotelomer Sulfonic Acids															
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.001	<0.05
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.001	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.05	<0.05	<0.001	<0.05	<0.05	<0.05	<0.05	<0.001	<0.05
PFAS - Sums															
PFAS (Sum of Total)	µg/L	<0.01	0.0002			0.0053	0.02	<0.01	0.0003	0.02	<0.01	<0.01	<0.01	-	<0.01
PFAS (Sum of Total)(WA DER List)	µg/L	<0.01	0.0002			0.0053	0.02	<0.01	0.0003	0.02	<0.01	<0.01	<0.01	<0.005	<0.01
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	0.001			-	-	-	-	-	-	-	-	<0.001	-
Sum of PFHxS and PFOS	µg/L	<0.01	0.0002		2	0.0053	0.02	<0.01	0.0003	0.02	<0.01	<0.01	<0.01	<0.001	<0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	0.001			-	-	-	-	-	-	-	-	<0.001	-

Comments
#1 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards
HEPA, March 2025, PFAS NEMP 3.0 2025 Interim marine 99%
HEPA, March 2025, PFAS NEMP 3.0 2025 Recreational water quality



Monitoring Zone						Wapet Creek							
Location Code						0960_SW208	0960_SW208	0960_SW208	0960_SW209	0960_SW211	0960_SW303	0960_SW304	0960_SW305
Sample Type						Normal	Field Duplicate	Interlab Split	Normal	Normal	Normal	Normal	Normal
Field ID						0960_SW208_250630	0960_QC114_250630	0960_QC214_250630	0960_SW209_250627	0960_SW211_250627	0960_SW303_250629	0960_SW304_250629	0960_SW305_250627
Date						30 Jun 2025	30 Jun 2025	30 Jun 2025	27 Jun 2025	27 Jun 2025	29 Jun 2025	29 Jun 2025	27 Jun 2025
Lab Report Number						EP2510792	EP2510792	1241100	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792
	Unit	LOR (standard)	LOR (super ultra trace)	PFAS NEMP 3.0 2025 Interim marine 99%	PFAS NEMP 3.0 2025 Recreational water quality								
PFAS - Perfluoroalkyl Sulfonic Acids													
Perfluorobutane sulfonic acid (PFBS)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorodecanesulfonic acid (PFDS)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorononane sulfonate (PFNS)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	0.0006	<0.02	<0.02	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorooctane sulfonic acid (PFOS)	µg/L	<0.01	0.0001	0.00023	2	<0.0002	<0.0002	<0.0001	0.0004	0.0173	<0.01	<0.01	0.0002
Perfluoropropanesulfonic acid (PFPrS)	µg/L	<0.02	0.001			<0.0020	<0.0020	<0.001	<0.0020	<0.0020	<0.02	<0.02	<0.0020
Perfluoropentane sulfonic acid (PFPeS)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	µg/L	<0.01	0.0005		2	<0.0005	<0.0005	<0.001	<0.0005	0.0007	<0.01	<0.01	<0.0005
PFAS - Perfluoroalkyl Carboxylic Acids													
Perfluorobutanoic acid (PFBA)	µg/L	<0.1	0.002			<0.0020	<0.0020	<0.005	<0.0020	<0.0020	<0.1	<0.1	<0.0020
Perfluorodecanoic acid (PFDA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorododecanoic acid (PFDoDA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluoroheptanoic acid (PFHpA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorohexanoic acid (PFHxA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorononanoic acid (PFNA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorooctanoic acid (PFOA)	µg/L	<0.01	0.0005	19	10	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.01	<0.01	<0.0005
Perfluoropentanoic acid (PFPeA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	<0.05	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.05	<0.05	<0.0005
Perfluorotridecanoic acid (PFTriDA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
Perfluoroundecanoic acid (PFUnDA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.02	<0.02	<0.0005
PFAS - Perfluoroalkyl Sulfonamide													
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	<0.05	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.05	<0.05	<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.02	<0.02	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	<0.05	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.05	<0.05	<0.001
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	<0.05	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.05	<0.05	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.02	<0.02	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	<0.05	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.05	<0.05	<0.001
Perfluorooctane sulfonamide (PFOSA)	µg/L	<0.02	0.0005			<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.02	<0.02	<0.0005
PFAS - Fluorotelomer Sulfonic Acids													
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.001	<0.005	<0.001	<0.001	<0.05	<0.05	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	<0.05	0.001			<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.001
PFAS - Sums													
PFAS (Sum of Total)	µg/L	<0.01	0.0002			<0.0002	<0.0002	-	0.0004	0.0186	<0.01	<0.01	0.0002
PFAS (Sum of Total)(WA DER List)	µg/L	<0.01	0.0002			<0.0002	<0.0002	<0.005	0.0004	0.0180	<0.01	<0.01	0.0002
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	-	0.001			-	-	<0.001	-	-	-	-	-
Sum of PFHxS and PFOS	µg/L	<0.01	0.0002		2	<0.0002	<0.0002	<0.001	0.0004	0.0180	<0.01	<0.01	0.0002
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	-	0.001			-	-	<0.001	-	-	-	-	-

Comments
#1 Reported Analyte LOR is higher than Requested Analyte LOR

Environmental Standards
HEPA, March 2025, PFAS NEMP 3.0 2025 Interim marine 99%
HEPA, March 2025, PFAS NEMP 3.0 2025 Recreational water quality



Monitoring Zone			Drainage channels (source and pathway)																											
Location Code	0960_SD009		0960_SD108		0960_SD113		0960_SD114		0960_SD121		0960_SD122		0960_SD123		0960_SD124		0960_SD125		0960_SD157		0960_SD166		0960_SD168		0960_SD168		0960_SD168		0960_SD170	
Sample Type	Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Field Duplicate		Interlab Split		Normal	
Field ID	0960_SD009_250628		0960_SD108_250625		0960_SD113_250625		0960_SD114_250624		0960_SD121_250623		0960_SD122_250623		0960_SD123_250623		0960_SD124_250625		0960_SD125_250625		0960_SD157_250625		0960_SD166_250625		0960_SD168_250625		0960_QC204_250625		0960_QC204_250625		0960_SD170_250625	
Date	28 Jun 2025		25 Jun 2025		25 Jun 2025		24 Jun 2025		23 Jun 2025		23 Jun 2025		23 Jun 2025		25 Jun 2025		25 Jun 2025		25 Jun 2025		25 Jun 2025		25 Jun 2025		25 Jun 2025		25 Jun 2025		25 Jun 2025	
Lab Report Number	EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		1241100		EP2510792			
	Unit	LOR																												
PFAS - Perfluoroalkyl Sulfonic Acids																														
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0032	0.0114	<0.0002	0.0023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0047	0.0021	<0.0002	0.0040	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorooheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	<0.0002	0.0032	0.0020	0.0009	0.0731	0.0070	0.0005	0.104	0.0062	0.0030	0.0005	0.0028	0.0029	0.0012														
Perfluoropropanesulfonic acid (PFPS)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
PFAS - Perfluoroalkyl Carboxylic Acids																														
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0009	0.0004	<0.0002	0.0023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorododecanoic acid (PFDdA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	0.0006	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.0008	<0.0002	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
PFAS - Perfluoroalkyl Sulfonamide																														
N-Ethyl perfluorooctane sulfonamide (EiFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EiFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoethanol (EiFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
PFAS - Fluorotelomer Sulfonic Acids																														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005										

Page 2 of 4



Monitoring Zone Location Code Sample Type Field ID Date Lab Report Number			Drainage channels (source and pathway)													
			0960_SD234	0960_SD234	0960_SD235	0960_SD265	0960_SD278	0960_SD279	0960_SD288	0960_SD291	0960_SD292	0960_SD292	0960_SD292	0960_SD293	0960_SD298	
			Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Interlab Split	Normal	Normal	
			0960_SD234_250624	0960_SD243_250625	0960_SD235_250624	0960_SD265_250625	0960_SD278_250625	0960_SD279_250625	0960_SD288_250626	0960_SD291_250624	0960_SD292_250624	0960_QC103_250624	0960_QC203_250625	0960_SD293_250624	0960_SD298_250628	
			24 Jun 2025	25 Jun 2025	24 Jun 2025	25 Jun 2025	25 Jun 2025	25 Jun 2025	26 Jun 2025	24 Jun 2025	24 Jun 2025	24 Jun 2025	24 Jun 2025	24 Jun 2025	28 Jun 2025	
			EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	EP2510792	1241100	EP2510792	EP2510792		
PFAS - Perfluoroalkyl Sulfonic Acids	Unit	LOR														
	Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
	Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	0.0006	0.0004	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	
	Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	0.0026	0.0005	<0.0002	0.0009	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
	Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
	Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	0.0931	0.0135	0.0024	0.0114	0.0050	0.0103	0.0005	0.0020	0.0024	0.0030	<0.0002	<0.0002	
	Perfluoropropane sulfonic acid (PFPS)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	
	Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
	Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	0.0003	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
	PFAS - Perfluoroalkyl Carboxylic Acids	Unit	LOR													
Perfluorobutanoic acid (PFBA)		mg/kg	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	
Perfluorodecanoic acid (PFDA)		mg/kg	0.0002	0.0009	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorododecanoic acid (PFDoDA)		mg/kg	0.0002	0.0004	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoroheptanoic acid (PFHpA)		mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexanoic acid (PFHxA)		mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononanoic acid (PFNA)		mg/kg	0.0002	0.0009	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorooctanoic acid (PFOA)		mg/kg	0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluoropentanoic acid (PFPeA)		mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorotetradecanoic acid (PFTeDA)		mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
PFAS - Perfluoroalkyl Sulfonamide	Unit	LOR														
	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	
	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
	N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	
	N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
	Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
	PFAS - Fluorotelomer Sulfonic Acids	Unit	LOR													
		4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer Sulfonate (6:2 FTS)		mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)		mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)		mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PFAS - Sums	Unit	LOR														
	PFAS (Sum of Total)	mg/kg	0.0002	0.0991	0.0144	0.0024	0.0145	0.0052	0.0103	0.0005	0.0020	0.0024	0.0030	<0.05	0.0032	
	PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	0.0937	0.0135	0.0024	0.0117	0.0050	0.0103	0.0005	0.0020	0.0024	0.0030	<0.01	0.0029	
	Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	<0.005	-	
	Sum of PFHxS and PFOS	mg/kg	0.0002	0.0934	0.0135	0.0024	0.0117	0.0050	0.0103	0.0005	0.0020	0.0024	0.0030	<0.005	0.0029	
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	<0.005	-	



Monitoring Zone			Receptor (Wapet Creek)																											
			Location Code		0960_SD205		0960_SD207		0960_SD208		0960_SD208		0960_SD209		0960_SD210		0960_SD211		0960_SD300		0960_SD301		0960_SD302		0960_SD303		0960_SD305			
			Sample Type		Normal		Normal		Normal		Interlab Split		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal		Normal	
			Field ID		0960_SD205_250629		0960_SD207_250628		0960_SD208_250630		0960_QC213_250630		0960_SD209_250627		0960_SD210_250624		0960_SD211_250627		0960_SD300_250629		0960_SD301_250629		0960_SD302_250625		0960_SD303_250629		0960_SD305_250627			
			Date		29 Jun 2025		28 Jun 2025		30 Jun 2025		30 Jun 2025		27 Jun 2025		24 Jun 2025		27 Jun 2025		29 Jun 2025		29 Jun 2025		25 Jun 2025		29 Jun 2025		27 Jun 2025			
Lab Report Number			EP2510792		EP2510792		EP2510792		1241100		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792		EP2510792					
			Unit	LOR																										
PFAS - Perfluoroalkyl Sulfonic Acids																														
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorononane sulfonate (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0099	0.0016	0.0022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluoropropanesulfonic acid (PFPS)	mg/kg	0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
PFAS - Perfluoroalkyl Carboxylic Acids																														
Perfluorobutanoic acid (PFBA)	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001				
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorononanoic acid (PFNA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorooctanoic acid (PFOA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
PFAS - Perfluoroalkyl Sulfonamide																														
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
PFAS - Fluorotelomer Sulfonic Acids																														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005				
PFAS - Sums																														
PFAS (Sum of Total)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.05	<0.0002	0.0105	0.0016	0.0022	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002				
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.01	<0.0002	0.0105	0.0016	0.0022	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<											

Appendix D

Equipment calibration



Calibration Report

Multi-Parameter Water Quality Instrument

Customer:

Contact:

Manufacturer: YSI

Instrument: Professional Plus with Quatro cable

Serial #: 22C103026

Cable length: 1m (25A100380)

Item	Test	Pass	Comments
Battery	2 x Alkaline C-cells	✓	Voltage reading above 2.9V
	Battery Saver	✓	Automatically turns off after 30 minutes if not used
Connections	Condition	✓	Good, clean
Cable	Condition	✓	Clean, no tears
Display	Operation	✓	
Firmware	Version	✓	4.0.0
Keypad	Operational	✓	
Display	Screen	✓	
Unit	Condition, seals and O-rings	✓	
Monitor housing	Condition	✓	
pH			
Condition		✓	Good, clean
pH millivolts for pH7 calibration range	0 mV ± 50 mV	✓	
pH 4 mV range + 165 to + 180 from 7 buffer mV value		✓	173.50 mV
pH slope		✓	55 to 60 mV/pH, ideal 59mV 58.54
Response time < 90 seconds		✓	
Calibrated and conforms to manufacturer's specifications		✓	
ORP			
Condition		✓	Good, clean
Response time < 90 seconds		✓	
within ± 80mv of reference Zobell Reading		✓	
Calibrated and conforms to manufacturer's specifications		✓	variance range ± 20mV 10 mV
Conductivity			
Condition		✓	Good, clean
Temperature		✓	°C
Conductivity cell constant	5.0 ± 1.0 in GLP file	✓	
Clean sensor reads less than 3 uS/cm in dry air		✓	
Calibrated and conforms to manufacturer's specifications		✓	µS/cm
Dissolved Oxygen			
Condition		✓	Good, clean
DO sensor in use		✓	polarographic
1.25 mil PE membrane (yellow membrane):		✓	
DO Sensor Value		✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA
Calibrated and conforms to manufacturer's specifications		✓	ppm

This is to certify that the above instrument has been calibrated to the following specifications:

Parameter	Standards	Reference	Calibration Point	Span	Units	Instrument Readings		
						Before	After	Units
Temperature (25A100726)	Check Temp NATA	Room Temp	19	0	°C	NA	19	°C
pH (24J)	pH 7.00	398528	7.01	-18.40	mV	7.04	7.01	pH
pH (24J)	pH 4.00	435813	4.00	155.10	mV	4.01	4.00	pH
Conductivity (25A100726)	2764 µS/cm at 25°C	25/2001	2764	GLP	4.98	2769	2764	µS/cm
ORP (25A)	Zobell A & B	25/2001	242	242	mV	229.1	231.8	mV
Zero DO (24L100492)	NaSO3 in distilled water	10175	0.0	NA	NA	0.1	0.0	%
100% DO (24L100492)	100% Air Saturation	Air	100.0	5.3	uA	98.8	100.0	%

Calibrated by:

Calibration Date: 16-Jun-25

Next Due: 13-Dec-25

Date of bump test	Site ID	Unit Brand/Model	Ambient Air Oxygen Calibration	Zero oxygen solution Calibration (%)	Standard Concentrations	Bump test reading	Bump test readings within $\pm 3\%$?	Ambient Temperature ($^{\circ}\text{C}$)	Comments	Test By (Name)	Tester's Signature
23/6	0960	YSI Pro-Quatro	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.01 pH: 7.00 EC: 1412	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	22.2	-		
24/6	0960	"	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.03 pH: 7.01 EC: 1413	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	21.5	-	"	
25/6	0960	"	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.05 pH: 7.04 EC: 1414	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	21.3	-	"	
26/6	0960	"	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.09 pH: 7.06 EC: 1414	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	23.1	-	"	
27/6	0960	YSI Pro-Quatro	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.08 pH: 7.07 EC: 1419	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	22.6	-	"	
28/6	0960	"	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.14 pH: 7.10 EC: 1422	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	22.5	neutral as out of range.	"	
29/6	0960	"	100% Saturation Y N	0% Calibration Y N	pH: 4.00 Y/N pH: 7.00 Y/N EC: 1,413 $\mu\text{S}/\text{cm}$ Y/N	pH: 4.02 pH: 7.08 EC: 1414	pH 4.00: ($\pm$ pH 0.12) Y/N pH 7.00: ($\pm$ pH 0.12) Y/N EC 1,413 $\mu\text{S}/\text{cm}$ ($\pm$ 42.39 $\mu\text{S}/\text{cm}$) Y/N	22.4	-	"	

Appendix E

Laboratory certificates and chain of custody documents



CERTIFICATE OF ANALYSIS

Work Order : **EP2510792**
Client : **GHD PTY LTD**
Contact : **[REDACTED]**
Address : **999 HAY STREET**
PERTH WA, AUSTRALIA 6000
Telephone : **----**
Project : **WA_0960_PFASOMP_25**
Order number : **12641234/02.2.8**
C-O-C number : **79896**
Sampler : **[REDACTED]**
Site : **0960**
Quote number : **EP24GHDSE0016_V5**
No. of samples received : **170**
No. of samples analysed : **169**

Page : 1 of 103
Laboratory : Environmental Division Perth
Contact : **[REDACTED]**
Address : 26 Rigali Way Wangara WA Australia 6065
Telephone : +61-8-9406 1301
Date Samples Received : 07-Jul-2025 14:00
Date Analysis Commenced : 09-Jul-2025
Issue Date : 17-Jul-2025 15:17



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This 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

Laboratory Manager (Perth)
SENIOR LAB TECH
Organic Supervisor

Perth Inorganics, Wangara, WA
Perth Organics, Wangara, WA
Perth Organics, Wangara, WA



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X-SUT: LOR has been raised for particular analytes on sample "EP2510792-070" 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.

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW021_250623	0960_MW113_250623	0960_MW114_250623	0960_MW233_250623	0960_MW211_250623
Sampling date / time					23-Jun-2025 09:39	23-Jun-2025 12:24	23-Jun-2025 10:59	23-Jun-2025 11:15	23-Jun-2025 11:01
Compound	CAS Number	LOR	Unit	EP2510792-001	EP2510792-002	EP2510792-003	EP2510792-004	EP2510792-005	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	<0.02	<0.02	0.02	0.04	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.18	<0.02	<0.02	0.09	0.14	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.16	<0.02	<0.02	0.09	0.16	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.20	<0.01	<0.01	1.04	2.49	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	0.35	0.22	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.57	<0.01	<0.01	1.10	9.96	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	0.2	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.10	<0.02	<0.02	0.09	0.27	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.33	<0.02	<0.02	0.20	0.49	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	<0.02	<0.02	0.03	0.11	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	<0.01	<0.01	0.12	0.23	
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									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW021_250623	0960_MW113_250623	0960_MW114_250623	0960_MW233_250623	0960_MW211_250623
Sampling date / time				23-Jun-2025 09:39	23-Jun-2025 12:24	23-Jun-2025 10:59	23-Jun-2025 11:15	23-Jun-2025 11:01
Compound	CAS Number	LOR	Unit	EP2510792-001	EP2510792-002	EP2510792-003	EP2510792-004	EP2510792-005
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	2.64	<0.01	<0.01	3.13	14.3
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	1.77	<0.01	<0.01	2.14	12.4
Sum of PFAS (WA DER List)	----	0.01	µg/L	2.44	<0.01	<0.01	2.67	13.9
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	99.3	110	94.8	98.2	96.4
13C8-PFOA	----	0.02	%	97.0	86.5	99.8	99.3	96.2

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW162_250623	0960_MW164_250623	0960_MW018_250623	0960_MW165_250623	0960_MW166_250623
Sampling date / time				23-Jun-2025 11:33	23-Jun-2025 13:32	23-Jun-2025 14:33	23-Jun-2025 14:07	23-Jun-2025 14:59	
Compound	CAS Number	LOR	Unit	EP2510792-006	EP2510792-007	EP2510792-008	EP2510792-009	EP2510792-010	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.09	0.02	0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.27	0.07	0.08	<0.02	0.04	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.27	0.08	0.08	<0.02	0.03	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	2.24	0.64	0.85	<0.01	0.21	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	0.03	0.05	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.32	0.96	0.52	0.02	0.16	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.1	<0.1	1.2	<0.1	0.2	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.13	0.06	2.34	<0.02	0.47	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.50	0.19	2.66	<0.02	0.36	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	0.03	4.11	<0.02	0.48	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.09	0.03	0.65	<0.01	0.40	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.02	<0.02	0.04	
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									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW162_250623	0960_MW164_250623	0960_MW018_250623	0960_MW165_250623	0960_MW166_250623
Sampling date / time				23-Jun-2025 11:33	23-Jun-2025 13:32	23-Jun-2025 14:33	23-Jun-2025 14:07	23-Jun-2025 14:59
Compound	CAS Number	LOR	Unit	EP2510792-006	EP2510792-007	EP2510792-008	EP2510792-009	EP2510792-010
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	4.11	2.11	12.6	0.02	2.39
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	2.56	1.60	1.37	0.02	0.37
Sum of PFAS (WA DER List)	----	0.01	µg/L	3.69	1.98	12.4	0.02	2.32
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	94.2	93.2	94.8	95.2	92.7
13C8-PFOA	----	0.02	%	90.5	93.2	94.2	90.9	94.2

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sample ID

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW167_250623	0960_MW168_250623	0960_MW112_250623	0960_MW115_250625	0960_MW105_250624
Sampling date / time				23-Jun-2025 15:32	25-Jun-2025 11:41	23-Jun-2025 16:02	25-Jun-2025 09:00	24-Jun-2025 07:56
Compound	CAS Number	LOR	Unit	EP2510792-011	EP2510792-012	EP2510792-013	EP2510792-014	EP2510792-015
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	1.62	1.01	0.92	3.20	2.37
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.87	0.68	0.79	2.08	1.35
Sum of PFAS (WA DER List)	----	0.01	µg/L	1.56	0.95	0.89	2.88	2.02
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	98.4	94.9	96.0	94.0	95.9
13C8-PFOA	----	0.02	%	94.2	95.0	88.6	94.7	94.3

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW148D_25062

0960_MW148S_25062

0960_MW151_250630

0960_MW159_250630

0960_MW122_250624

Sampling date / time

23-Jun-2025 16:42

23-Jun-2025 16:43

30-Jun-2025 08:34

30-Jun-2025 09:43

24-Jun-2025 09:31

Compound	CAS Number	LOR	Unit	EP2510792-016	EP2510792-017	EP2510792-018	EP2510792-019	EP2510792-020
				Result	Result	Result	Result	Result

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.29	2.44	0.03	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.87	6.50	0.14	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.55	4.46	0.27	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	2.57	26.4	5.20	<0.01	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.24	1.77	0.24	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.41	8.52	4.61	<0.01	<0.01
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.2	2.2	0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.22	3.29	0.35	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.94	14.3	0.91	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.10	0.92	0.15	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.18	1.38	0.21	<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



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW148D_25062 3	0960_MW148S_25062 3	0960_MW151_250630	0960_MW159_250630	0960_MW122_250624
Sampling date / time				23-Jun-2025 16:42	23-Jun-2025 16:43	30-Jun-2025 08:34	30-Jun-2025 09:43	24-Jun-2025 09:31
Compound	CAS Number	LOR	Unit	EP2510792-016	EP2510792-017	EP2510792-018	EP2510792-019	EP2510792-020
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	7.57	72.2	12.2	<0.01	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	3.98	34.9	9.81	<0.01	<0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L	6.49	63.5	11.7	<0.01	<0.01
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	98.5	96.5	95.2	97.1	98.2
13C8-PFOA	----	0.02	%	97.0	95.5	97.5	97.9	106

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW146A_25062

0960_MW147A_25062

0960_MW180A_25062

0960_MW181A_25062

0960_MW172_250626

Sampling date / time

27-Jun-2025 09:35

27-Jun-2025 17:09

28-Jun-2025 10:40

28-Jun-2025 16:01

26-Jun-2025 07:56

Compound	CAS Number	LOR	Unit	EP2510792-021	EP2510792-022	EP2510792-023	EP2510792-024	EP2510792-025
				Result	Result	Result	Result	Result

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.32
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.89
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	1.30
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	10.6
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.54
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	4.25
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	0.3
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.76
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	2.71
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.33
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	0.52
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



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW146A_25062 7	0960_MW147A_25062 7	0960_MW180A_25062 8	0960_MW181A_25062 8	0960_MW172_250626
Sampling date / time					27-Jun-2025 09:35	27-Jun-2025 17:09	28-Jun-2025 10:40	28-Jun-2025 16:01	26-Jun-2025 07:56
Compound	CAS Number	LOR	Unit	EP2510792-021	EP2510792-022	EP2510792-023	EP2510792-024	EP2510792-025	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	22.5	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	14.8	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	20.4	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	93.8	92.9	102	99.4	101	
13C8-PFOA	----	0.02	%	92.5	94.1	99.7	98.1	101	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW170_250625	0960_MW127_250625	0960_MW126_250625	0960_MW139_250624	0960_MW140A_250628
25-Jun-2025 11:23	25-Jun-2025 12:28	25-Jun-2025 12:49	24-Jun-2025 13:39	28-Jun-2025 13:50
EP2510792-026	EP2510792-027	EP2510792-028	EP2510792-029	EP2510792-030
Result	Result	Result	Result	Result

EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.35	<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
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.02	<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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW170_250625	0960_MW127_250625	0960_MW126_250625	0960_MW139_250624	0960_MW140A_250628
Sampling date / time					25-Jun-2025 11:23	25-Jun-2025 12:28	25-Jun-2025 12:49	24-Jun-2025 13:39	28-Jun-2025 13:50
Compound	CAS Number	LOR	Unit	EP2510792-026	EP2510792-027	EP2510792-028	EP2510792-029	EP2510792-030	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.47	<0.01	<0.01	<0.01	<0.01	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.37	<0.01	<0.01	<0.01	<0.01	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.43	<0.01	<0.01	<0.01	<0.01	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	101	98.4	100	99.5	96.5	
13C8-PFOA	----	0.02	%	97.4	104	99.2	101	102	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW102_250625	0960_MW145A_250625 8	0960_MW103_250624	0960_MW104_250624	0960_MW134_250625
25-Jun-2025 13:38	28-Jun-2025 11:08	24-Jun-2025 10:56	24-Jun-2025 08:53	25-Jun-2025 07:44
EP2510792-031	EP2510792-032	EP2510792-033	EP2510792-034	EP2510792-035
Result	Result	Result	Result	Result

EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.06	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.16	0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.07	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.22	0.05	<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
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.04	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW102_250625	0960_MW145A_250628	0960_MW103_250624	0960_MW104_250624	0960_MW134_250625
Sampling date / time				25-Jun-2025 13:38	28-Jun-2025 11:08	24-Jun-2025 10:56	24-Jun-2025 08:53	25-Jun-2025 07:44	
Compound	CAS Number	LOR	Unit	EP2510792-031	EP2510792-032	EP2510792-033	EP2510792-034	EP2510792-035	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.57	0.07	<0.01	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	0.22	0.05	<0.01	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	0.44	0.07	<0.01	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%	99.8	97.1	101	95.9	97.7	
13C8-PFOA	----	0.02	%	103	98.8	100	102	103	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW135A_25062

0960_MW175A_25063

0960_MW124_250625

0960_MW144A_25062

0960_MW143A_25062

Sampling date / time

26-Jun-2025 14:16

30-Jun-2025 13:21

25-Jun-2025 13:59

26-Jun-2025 13:20

27-Jun-2025 15:57

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW135A_25062 6	0960_MW175A_25063 0	0960_MW124_250625	0960_MW144A_25062 6	0960_MW143A_25062 7
Sampling date / time					26-Jun-2025 14:16	30-Jun-2025 13:21	25-Jun-2025 13:59	26-Jun-2025 13:20	27-Jun-2025 15:57
Compound	CAS Number	LOR	Unit	EP2510792-036	EP2510792-037	EP2510792-038	EP2510792-039	EP2510792-040	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	<0.01	<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	%	99.3	96.8	95.1	100	97.7	
13C8-PFOA	----	0.02	%	98.4	101	96.0	101	102	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW137A_25062

0960_MW137B_25062

0960_MW137C_25062

0960_MW137D_25062

0960_MW177A_25062

Sampling date / time

24-Jun-2025 15:55

24-Jun-2025 16:04

24-Jun-2025 16:06

24-Jun-2025 16:07

29-Jun-2025 16:50

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW137A_25062 4	0960_MW137B_25062 4	0960_MW137C_25062 4	0960_MW137D_25062 4	0960_MW177A_25062 9
Sampling date / time					24-Jun-2025 15:55	24-Jun-2025 16:04	24-Jun-2025 16:06	24-Jun-2025 16:07	29-Jun-2025 16:50
Compound	CAS Number	LOR	Unit	EP2510792-041	EP2510792-042	EP2510792-043	EP2510792-044	EP2510792-045	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	0.001	0.002	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EP231P: PFAS Sums									
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0018	0.0041	0.0065	0.0057	<0.0002	
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0018	0.0041	0.0075	0.0077	<0.0002	
^ Sum of PFAS	----	0.0002	µg/L	0.0018	0.0041	0.0075	0.0077	<0.0002	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0005	%	104	102	106	105	110	
13C8-PFOA	----	0.0005	%	113	109	107	109	89.7	

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

0960_MW177B_25062

0960_MW177C_25062

0960_MW176A_25062

0960_MW176B_25062

0960_MW176C_25062

Sampling date / time

29-Jun-2025 16:45

29-Jun-2025 16:29

29-Jun-2025 15:02

29-Jun-2025 15:03

29-Jun-2025 15:04

Compound	CAS Number	LOR	Unit	EP2510792-046	EP2510792-047	EP2510792-048	EP2510792-049	EP2510792-050
				Result	Result	Result	Result	Result

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0006	0.0007	<0.0005	<0.0005	0.0010
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0006	0.0006	<0.0002	<0.0002	0.0018
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177B_25062 9	0960_MW177C_25062 9	0960_MW176A_25062 9	0960_MW176B_25062 9	0960_MW176C_25062 9
Sampling date / time					29-Jun-2025 16:45	29-Jun-2025 16:29	29-Jun-2025 15:02	29-Jun-2025 15:03	29-Jun-2025 15:04
Compound	CAS Number	LOR	Unit	EP2510792-046	EP2510792-047	EP2510792-048	EP2510792-049	EP2510792-050	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EP231P: PFAS Sums									
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0012	0.0013	<0.0002	<0.0002	0.0028	
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0012	0.0013	<0.0002	<0.0002	0.0028	
^ Sum of PFAS	----	0.0002	µg/L	0.0012	0.0013	<0.0002	<0.0002	0.0028	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0005	%	104	110	102	105	104	
13C8-PFOA	----	0.0005	%	87.8	108	90.0	109	111	

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177D_25062 9	0960_MW178A_25062 7	0960_MW178B_25062 7	0960_MW178C_25062 7	0960_MW178D_25062 7
Sampling date / time				29-Jun-2025 16:19	27-Jun-2025 12:29	27-Jun-2025 11:53	27-Jun-2025 11:27	27-Jun-2025 12:28	
Compound	CAS Number	LOR	Unit	EP2510792-051	EP2510792-052	EP2510792-053	EP2510792-054	EP2510792-055	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	0.0014	<0.0005	<0.0005	<0.0005	0.0012	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0029	<0.0002	<0.0002	<0.0002	0.0016	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW177D_25062 9	0960_MW178A_25062 7	0960_MW178B_25062 7	0960_MW178C_25062 7	0960_MW178D_25062 7
Sampling date / time					29-Jun-2025 16:19	27-Jun-2025 12:29	27-Jun-2025 11:53	27-Jun-2025 11:27	27-Jun-2025 12:28
Compound	CAS Number	LOR	Unit	EP2510792-051	EP2510792-052	EP2510792-053	EP2510792-054	EP2510792-055	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EP231P: PFAS Sums									
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0043	<0.0002	<0.0002	<0.0002	0.0028	
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0043	<0.0002	<0.0002	<0.0002	0.0028	
^ Sum of PFAS	----	0.0002	µg/L	0.0043	<0.0002	<0.0002	<0.0002	0.0028	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0005	%	104	114	99.3	103	103	
13C8-PFOA	----	0.0005	%	110	92.4	87.7	85.5	109	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0960_MW179A_25062

0960_MW179B_25062

0960_MW179C_25062

0960_MW179D_25062

0960_MW141A_25062

Sampling date / time

28-Jun-2025 09:03

28-Jun-2025 09:01

28-Jun-2025 08:55

28-Jun-2025 08:25

29-Jun-2025 10:42

Compound

CAS Number

LOR

Unit

EP2510792-056

EP2510792-057

EP2510792-058

EP2510792-05

EP2510792-060

Result

Result

Result

Result

Result

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0002	0.0003	0.0003	<0.0002	<0.0002
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	0.0031	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW179A_25062 8	0960_MW179B_25062 8	0960_MW179C_25062 8	0960_MW179D_25062 8	0960_MW141A_25062 9
Sampling date / time				28-Jun-2025 09:03	28-Jun-2025 09:01	28-Jun-2025 08:55	28-Jun-2025 08:25	29-Jun-2025 10:42	
Compound	CAS Number	LOR	Unit	EP2510792-056	EP2510792-057	EP2510792-058	EP2510792-059	EP2510792-060	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EP231P: PFAS Sums									
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0002	0.0003	0.0003	<0.0002	<0.0002	
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0033	0.0003	0.0003	<0.0002	<0.0002	
^ Sum of PFAS	----	0.0002	µg/L	0.0033	0.0003	0.0003	<0.0002	<0.0002	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0005	%	104	110	124	107	96.8	
13C8-PFOA	----	0.0005	%	110	84.0	90.4	84.7	99.8	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW141B_25062 9	0960_MW141C_25062 9	0960_MW141D_25062 9	0960_QC101_250623	0960_QC102_250624
Sampling date / time				29-Jun-2025 10:41	29-Jun-2025 10:03	29-Jun-2025 09:58	23-Jun-2025 14:35	24-Jun-2025 08:58
Compound	CAS Number	LOR	Unit	EP2510792-061	EP2510792-062	EP2510792-063	EP2510792-131	EP2510792-135
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	----	0.07	0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	----	0.10	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	----	1.00	0.05
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	----	0.06	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0003	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	----	0.54	<0.01
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	----	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	----	1.2	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	----	2.56	<0.02



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW141B_25062 9	0960_MW141C_25062 9	0960_MW141D_25062 9	0960_QC101_250623	0960_QC102_250624
Sampling date / time				29-Jun-2025 10:41	29-Jun-2025 10:03	29-Jun-2025 09:58	23-Jun-2025 14:35	24-Jun-2025 08:58
Compound	CAS Number	LOR	Unit	EP2510792-061	EP2510792-062	EP2510792-063	EP2510792-131	EP2510792-135
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	----	2.87	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	----	4.56	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	----	0.64	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	----	0.03	<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 (PFTTrDA)	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
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	0.0015	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	----	<0.02	<0.02



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW141B_25062 9	0960_MW141C_25062 9	0960_MW141D_25062 9	0960_QC101_250623	0960_QC102_250624
Sampling date / time				29-Jun-2025 10:41	29-Jun-2025 10:03	29-Jun-2025 09:58	23-Jun-2025 14:35	24-Jun-2025 08:58
Compound	CAS Number	LOR	Unit	EP2510792-061	EP2510792-062	EP2510792-063	EP2510792-131	EP2510792-135
				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
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
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	----
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



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW141B_25062 9	0960_MW141C_25062 9	0960_MW141D_25062 9	0960_QC101_250623	0960_QC102_250624
Sampling date / time				29-Jun-2025 10:41	29-Jun-2025 10:03	29-Jun-2025 09:58	23-Jun-2025 14:35	24-Jun-2025 08:58
Compound	CAS Number	LOR	Unit	EP2510792-061	EP2510792-062	EP2510792-063	EP2510792-131	EP2510792-135
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
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
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.002	0.004	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	----	----	----	13.6	0.07
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	----	1.54	0.05
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	----	13.4	0.07
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0003	----	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	0.0020	0.0058	----	----
^ Sum of PFAS	----	0.0002	µg/L	<0.0002	0.0020	0.0058	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	----	----	----	93.3	99.4
13C8-PFOA	----	0.02	%	----	----	----	97.0	92.3
13C4-PFOS	----	0.0005	%	100	103	99.3	----	----
13C8-PFOA	----	0.0005	%	107	90.4	87.0	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW229_250624	0960_MW230_250624	0960_MW227_250624	0960_QC105_250625	0960_MW239A_250625
Sampling date / time					25-Jun-2025 11:32	25-Jun-2025 11:36	25-Jun-2025 11:39	25-Jun-2025 12:50	25-Jun-2025 16:07
Compound	CAS Number	LOR	Unit	EP2510792-140	EP2510792-141	EP2510792-142	EP2510792-143	EP2510792-144	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	----	<0.01	0.11	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	----	<0.01	0.20	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	----	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	----	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW229_250624	0960_MW230_250624	0960_MW227_250624	0960_QC105_250625	0960_MW239A_250625
Sampling date / time					25-Jun-2025 11:32	25-Jun-2025 11:36	25-Jun-2025 11:39	25-Jun-2025 12:50	25-Jun-2025 16:07
Compound	CAS Number	LOR	Unit	EP2510792-140	EP2510792-141	EP2510792-142	EP2510792-143	EP2510792-144	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	----	<0.01	0.02	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	----	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	----	<0.05	<0.05	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_MW229_250624	0960_MW230_250624	0960_MW227_250624	0960_QC105_250625	0960_MW239A_250625
Sampling date / time					25-Jun-2025 11:32	25-Jun-2025 11:36	25-Jun-2025 11:39	25-Jun-2025 12:50	25-Jun-2025 16:07
Compound	CAS Number	LOR	Unit	EP2510792-140	EP2510792-141	EP2510792-142	EP2510792-143	EP2510792-144	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	----	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	----	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	----	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	----	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_MW229_250624	0960_MW230_250624	0960_MW227_250624	0960_QC105_250625	0960_MW239A_250625
Sampling date / time				25-Jun-2025 11:32	25-Jun-2025 11:36	25-Jun-2025 11:39	25-Jun-2025 12:50	25-Jun-2025 16:07
Compound	CAS Number	LOR	Unit	EP2510792-140	EP2510792-141	EP2510792-142	EP2510792-143	EP2510792-144
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	----	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	----	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	----	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Sum of PFAS	----	0.01	µg/L	----	----	----	<0.01	0.33
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	----	<0.01	0.31
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	----	<0.01	0.33
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	107	103	103	----	----
13C4-PFOS	----	0.02	%	----	----	----	103	88.5
13C8-PFOA	----	0.002	%	99.0	97.9	96.6	----	----
13C8-PFOA	----	0.02	%	----	----	----	104	95.4



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC403_250625	0960_QC303_250625	0960_QC106_250626	0960_MW174_250626	0960_MW228_250627
Sampling date / time				26-Jun-2025 09:54	26-Jun-2025 09:56	26-Jun-2025 11:53	26-Jun-2025 11:53	27-Jun-2025 09:02
Compound	CAS Number	LOR	Unit	EP2510792-145	EP2510792-146	EP2510792-148	EP2510792-149	EP2510792-151
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	<0.01	<0.01	<0.01
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	0.002	<0.002	<0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	<0.01	<0.01	<0.01
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC403_250625	0960_QC303_250625	0960_QC106_250626	0960_MW174_250626	0960_MW228_250627
Sampling date / time				26-Jun-2025 09:54	26-Jun-2025 09:56	26-Jun-2025 11:53	26-Jun-2025 11:53	27-Jun-2025 09:02
Compound	CAS Number	LOR	Unit	EP2510792-145	EP2510792-146	EP2510792-148	EP2510792-149	EP2510792-151
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	<0.005	<0.005	<0.005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	<0.005	<0.005	<0.005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	<0.002	<0.002	<0.002



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC403_250625	0960_QC303_250625	0960_QC106_250626	0960_MW174_250626	0960_MW228_250627
Sampling date / time				26-Jun-2025 09:54	26-Jun-2025 09:56	26-Jun-2025 11:53	26-Jun-2025 11:53	27-Jun-2025 09:02
Compound	CAS Number	LOR	Unit	EP2510792-145	EP2510792-146	EP2510792-148	EP2510792-149	EP2510792-151
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	<0.005	<0.005	<0.005
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC403_250625	0960_QC303_250625	0960_QC106_250626	0960_MW174_250626	0960_MW228_250627
Sampling date / time				26-Jun-2025 09:54	26-Jun-2025 09:56	26-Jun-2025 11:53	26-Jun-2025 11:53	27-Jun-2025 09:02
Compound	CAS Number	LOR	Unit	EP2510792-145	EP2510792-146	EP2510792-148	EP2510792-149	EP2510792-151
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	----	0.002	<0.002	<0.002
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	0.002	<0.002	<0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	0.002	<0.002	<0.002
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	----	103	98.7	100
13C4-PFOS	----	0.02	%	95.2	98.9	----	----	----
13C8-PFOA	----	0.002	%	----	----	103	102	100
13C8-PFOA	----	0.02	%	94.0	94.8	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC304_250626	0960_QC404_250626	0960_QC405_250627	0960_QC305_250627	0960_QC108_250627
Sampling date / time				27-Jun-2025 09:31	27-Jun-2025 09:34	27-Jun-2025 09:39	27-Jun-2025 11:25	27-Jun-2025 17:06
Compound	CAS Number	LOR	Unit	EP2510792-152	EP2510792-153	EP2510792-154	EP2510792-155	EP2510792-156
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	----	----	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	----	----	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	----	----	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	----	----	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	----	----	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	----	----	<0.01
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	----	----	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	----	----	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	----	----	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	----	----	<0.02



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC304_250626	0960_QC404_250626	0960_QC405_250627	0960_QC305_250627	0960_QC108_250627
Sampling date / time				27-Jun-2025 09:31	27-Jun-2025 09:34	27-Jun-2025 09:39	27-Jun-2025 11:25	27-Jun-2025 17:06
Compound	CAS Number	LOR	Unit	EP2510792-152	EP2510792-153	EP2510792-154	EP2510792-155	EP2510792-156
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	----	----	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	----	----	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	----	----	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	----	----	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	----	----	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	----	----	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	----	----	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	----	----	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	----	----	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC304_250626	0960_QC404_250626	0960_QC405_250627	0960_QC305_250627	0960_QC108_250627
Sampling date / time					27-Jun-2025 09:31	27-Jun-2025 09:34	27-Jun-2025 09:39	27-Jun-2025 11:25	27-Jun-2025 17:06
Compound	CAS Number	LOR	Unit	EP2510792-152	EP2510792-153	EP2510792-154	EP2510792-155	EP2510792-156	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	----	----	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	----	----	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	----	----	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	----	----	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	----	----	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	----	----	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	----	----	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	----	----	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC304_250626	0960_QC404_250626	0960_QC405_250627	0960_QC305_250627	0960_QC108_250627
Sampling date / time				27-Jun-2025 09:31	27-Jun-2025 09:34	27-Jun-2025 09:39	27-Jun-2025 11:25	27-Jun-2025 17:06
Compound	CAS Number	LOR	Unit	EP2510792-152	EP2510792-153	EP2510792-154	EP2510792-155	EP2510792-156
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	----	----	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	----	----	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	----	----	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Sum of PFAS	----	0.01	µg/L	----	----	----	----	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	----	----	<0.01
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	----	----	<0.01
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	105	102	98.5	106	----
13C4-PFOS	----	0.02	%	----	----	----	----	102
13C8-PFOA	----	0.002	%	92.7	95.8	90.5	90.0	----
13C8-PFOA	----	0.02	%	----	----	----	----	95.9



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC110_250629	0960_QC111_250629	0960_MW222_250630	0960_QC112_250630	0960_QC115_250630
Sampling date / time					29-Jun-2025 10:22	29-Jun-2025 11:28	30-Jun-2025 07:57	30-Jun-2025 09:44	30-Jun-2025 11:42
Compound	CAS Number	LOR	Unit	EP2510792-159	EP2510792-162	EP2510792-163	EP2510792-164	EP2510792-165	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	----	----	----	<0.0020	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	<0.01	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	0.013	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	0.003	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	0.014	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	<0.01	----	<0.01	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	<0.002	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	----	----	----	0.0016	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	0.013	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	----	----	----	<0.0005	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC110_250629	0960_QC111_250629	0960_MW222_250630	0960_QC112_250630	0960_QC115_250630
Sampling date / time					29-Jun-2025 10:22	29-Jun-2025 11:28	30-Jun-2025 07:57	30-Jun-2025 09:44	30-Jun-2025 11:42
Compound	CAS Number	LOR	Unit	EP2510792-159	EP2510792-162	EP2510792-163	EP2510792-164	EP2510792-165	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	----	----	----	----	<0.0005
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	<0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	<0.01	----	<0.01	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	0.02	----	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	<0.002	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	<0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	<0.002	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC110_250629	0960_QC111_250629	0960_MW222_250630	0960_QC112_250630	0960_QC115_250630
Sampling date / time					29-Jun-2025 10:22	29-Jun-2025 11:28	30-Jun-2025 07:57	30-Jun-2025 09:44	30-Jun-2025 11:42
Compound	CAS Number	LOR	Unit	EP2510792-159	EP2510792-162	EP2510792-163	EP2510792-164	EP2510792-165	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	<0.002	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	<0.005	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	<0.05	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	<0.005	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	----	----	----	<0.0020	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	----	----	----	0.0008	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	----	----	----	0.0022	
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	----	----	----	0.0010	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	<0.002	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	<0.02	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC110_250629	0960_QC111_250629	0960_MW222_250630	0960_QC112_250630	0960_QC115_250630
Sampling date / time					29-Jun-2025 10:22	29-Jun-2025 11:28	30-Jun-2025 07:57	30-Jun-2025 09:44	30-Jun-2025 11:42
Compound	CAS Number	LOR	Unit	EP2510792-159	EP2510792-162	EP2510792-163	EP2510792-164	EP2510792-165	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	<0.005	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	<0.05	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	<0.05	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	<0.005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	<0.05	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	<0.05	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	<0.02	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	<0.02	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	----	----	----	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	----	----	----	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	----	----	----	<0.001	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC110_250629	0960_QC111_250629	0960_MW222_250630	0960_QC112_250630	0960_QC115_250630
Sampling date / time					29-Jun-2025 10:22	29-Jun-2025 11:28	30-Jun-2025 07:57	30-Jun-2025 09:44	30-Jun-2025 11:42
Compound	CAS Number	LOR	Unit	EP2510792-159	EP2510792-162	EP2510792-163	EP2510792-164	EP2510792-165	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	----	----	----	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	----	----	----	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	<0.005	----	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	<0.05	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	<0.005	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	<0.05	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	<0.005	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	<0.05	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	<0.005	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	<0.05	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	----	----	----	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	0.002	----	----	----	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	----	----	----	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	----	----	----	<0.001	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	----	----	0.063	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC110_250629	0960_QC111_250629	0960_MW222_250630	0960_QC112_250630	0960_QC115_250630
Sampling date / time				29-Jun-2025 10:22	29-Jun-2025 11:28	30-Jun-2025 07:57	30-Jun-2025 09:44	30-Jun-2025 11:42
Compound	CAS Number	LOR	Unit	EP2510792-159	EP2510792-162	EP2510792-163	EP2510792-164	EP2510792-165
				Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued								
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	0.027	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	<0.01	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	0.060	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	<0.01	----
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	----	----	----	0.0016
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0020	----	----	----	0.0046
^ Sum of PFAS	----	0.0002	µg/L	0.0020	----	----	----	0.0056
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	----	101	----	----
13C4-PFOS	----	0.02	%	----	99.7	----	103	----
13C8-PFOA	----	0.002	%	----	----	87.5	----	----
13C8-PFOA	----	0.02	%	----	94.2	----	104	----
13C4-PFOS	----	0.0005	%	106	----	----	----	105
13C8-PFOA	----	0.0005	%	82.1	----	----	----	87.9



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC114_250630	0960_QC116_250630	0960_QC408_250630	0960_QC308_250630	0960_SW303_250629
Sampling date / time				30-Jun-2025 11:43	30-Jun-2025 13:39	30-Jun-2025 14:23	30-Jun-2025 14:25	29-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2510792-166	EP2510792-168	EP2510792-169	EP2510792-170	EP2510792-174
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	<0.01	<0.01	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	<0.01	----	----	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0960_QC114_250630	0960_QC116_250630	0960_QC408_250630	0960_QC308_250630	0960_SW303_250629
Sampling date / time					30-Jun-2025 11:43	30-Jun-2025 13:39	30-Jun-2025 14:23	30-Jun-2025 14:25	29-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2510792-166	EP2510792-168	EP2510792-169	EP2510792-170	EP2510792-174	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	----	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	<0.01	----	----	----	<0.01
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	----	----	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	<0.01	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	----	----	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	----	----	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	<0.002	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	----	----	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	<0.002	<0.002	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC114_250630	0960_QC116_250630	0960_QC408_250630	0960_QC308_250630	0960_SW303_250629
Sampling date / time				30-Jun-2025 11:43	30-Jun-2025 13:39	30-Jun-2025 14:23	30-Jun-2025 14:25	29-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2510792-166	EP2510792-168	EP2510792-169	EP2510792-170	EP2510792-174
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	<0.005	<0.005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	----	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	<0.005	<0.005	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	<0.002	<0.002	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	----	<0.02



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC114_250630	0960_QC116_250630	0960_QC408_250630	0960_QC308_250630	0960_SW303_250629
Sampling date / time				30-Jun-2025 11:43	30-Jun-2025 13:39	30-Jun-2025 14:23	30-Jun-2025 14:25	29-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2510792-166	EP2510792-168	EP2510792-169	EP2510792-170	EP2510792-174
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	<0.005	<0.005	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	----	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	<0.005	<0.005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	----	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	<0.005	<0.005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	----	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	<0.005	<0.005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	----	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	<0.002	<0.002	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	----	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	<0.002	<0.002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	----	<0.02
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC114_250630	0960_QC116_250630	0960_QC408_250630	0960_QC308_250630	0960_SW303_250629
Sampling date / time				30-Jun-2025 11:43	30-Jun-2025 13:39	30-Jun-2025 14:23	30-Jun-2025 14:25	29-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2510792-166	EP2510792-168	EP2510792-169	EP2510792-170	EP2510792-174
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	<0.005	<0.005	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	----	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	<0.005	<0.005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	<0.005	<0.005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	<0.005	<0.005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	<0.05
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	----	<0.002	<0.002	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0960_QC114_250630	0960_QC116_250630	0960_QC408_250630	0960_QC308_250630	0960_SW303_250629
Sampling date / time				30-Jun-2025 11:43	30-Jun-2025 13:39	30-Jun-2025 14:23	30-Jun-2025 14:25	29-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2510792-166	EP2510792-168	EP2510792-169	EP2510792-170	EP2510792-174
				Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued								
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	----	<0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	<0.002	<0.002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	----	<0.01
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	<0.002	<0.002	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	----	<0.01
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	----	----	----	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	----	----	----	----
^ Sum of PFAS	----	0.0002	µg/L	<0.0002	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	----	98.7	102	----
13C4-PFOS	----	0.02	%	----	94.6	----	----	99.5
13C8-PFOA	----	0.002	%	----	----	101	100	----
13C8-PFOA	----	0.02	%	----	99.0	----	----	103
13C4-PFOS	----	0.0005	%	98.5	----	----	----	----
13C8-PFOA	----	0.0005	%	103	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0960_MW132_250626

Sampling date / time

26-Jun-2025 00:00

Compound

CAS Number

LOR

Unit

EP2510792-175

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0960_MW132_250626

Sampling date / time

26-Jun-2025 00:00

Compound

CAS Number

LOR

Unit

EP2510792-175

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	98.7	----	----	----	----
13C8-PFOA	----	0.002	%	99.4	----	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC401_250623	0960_QC402_250624	0960_QC302_250624	0960_QC406_250628	0960_QC306_250628
Sampling date / time					23-Jun-2025 16:28	24-Jun-2025 16:45	24-Jun-2025 16:47	28-Jun-2025 08:47	28-Jun-2025 11:00
Compound	CAS Number	LOR	Unit	EP2510792-132	EP2510792-137	EP2510792-138	EP2510792-157	EP2510792-158	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	<0.01	<0.01	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	<0.01	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	<0.01	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	<0.01	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	<0.02	<0.02	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0960_QC401_250623	0960_QC402_250624	0960_QC302_250624	0960_QC406_250628	0960_QC306_250628
Sampling date / time				23-Jun-2025 16:28	24-Jun-2025 16:45	24-Jun-2025 16:47	28-Jun-2025 08:47	28-Jun-2025 11:00
Compound	CAS Number	LOR	Unit	EP2510792-132	EP2510792-137	EP2510792-138	EP2510792-157	EP2510792-158
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	<0.005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	<0.005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	<0.002	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC401_250623	0960_QC402_250624	0960_QC302_250624	0960_QC406_250628	0960_QC306_250628
Sampling date / time					23-Jun-2025 16:28	24-Jun-2025 16:45	24-Jun-2025 16:47	28-Jun-2025 08:47	28-Jun-2025 11:00
Compound	CAS Number	LOR	Unit	EP2510792-132	EP2510792-137	EP2510792-138	EP2510792-157	EP2510792-158	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	<0.005	----	----	
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	----	----	<0.05	<0.05	



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC401_250623	0960_QC402_250624	0960_QC302_250624	0960_QC406_250628	0960_QC306_250628
Sampling date / time					23-Jun-2025 16:28	24-Jun-2025 16:45	24-Jun-2025 16:47	28-Jun-2025 08:47	28-Jun-2025 11:00
Compound	CAS Number	LOR	Unit	EP2510792-132	EP2510792-137	EP2510792-138	EP2510792-157	EP2510792-158	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	<0.005	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	<0.005	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	<0.005	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	----	<0.002	<0.002	----	----	
Sum of PFAS	----	0.01	µg/L	<0.01	----	----	<0.01	<0.01	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	<0.002	<0.002	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	----	----	<0.01	<0.01	
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	<0.002	<0.002	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	----	----	<0.01	<0.01	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	----	102	106	----	----	
13C4-PFOS	----	0.02	%	105	----	----	102	89.0	
13C8-PFOA	----	0.002	%	----	97.3	99.2	----	----	
13C8-PFOA	----	0.02	%	101	----	----	98.1	94.6	

Sub-Matrix: RINSATE (Matrix: WATER)				Sample ID	0960_QC407_250629	0960_QC307_250629	----	----	----
Sampling date / time					29-Jun-2025 10:33	29-Jun-2025 10:43	----	----	----
Compound	CAS Number	LOR	Unit	EP2510792-160	EP2510792-161	-----	-----	-----	
				Result	Result	----	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<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	----	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<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									



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0960_QC407_250629	0960_QC307_250629	----	----	----
Sampling date / time				29-Jun-2025 10:33	29-Jun-2025 10:43	----	----	----
Compound	CAS Number	LOR	Unit	EP2510792-160	EP2510792-161	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	<0.01	<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	%	96.2	96.6	----	----	----
13C8-PFOA	----	0.02	%	99.9	95.1	----	----	----



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD199_250628	0960_SD200_250628	0960_SD219_250624	0960_SD108_250625	0960_SD113_250625
Sampling date / time				28-Jun-2025 11:32	28-Jun-2025 11:55	24-Jun-2025 11:28	25-Jun-2025 14:15	25-Jun-2025 10:19
Compound				CAS Number	LOR	Unit		
				EP2510792-084	EP2510792-085	EP2510792-086	EP2510792-087	EP2510792-088
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	0.0007	<0.0002	0.0004	0.0032	0.0020
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0007	<0.0002	0.0004	0.0032	0.0020
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0007	<0.0002	0.0004	0.0032	0.0020
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	100	102	106	103	104
13C8-PFOA	----	0.0002	%	106	108	107	109	104

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD114_250624	0960_SD121_250623	0960_SD122_250623	0960_SD123_250623	0960_SD124_250625
Sampling date / time				24-Jun-2025 08:15	23-Jun-2025 13:11	23-Jun-2025 13:12	23-Jun-2025 13:22	25-Jun-2025 09:38	
Compound	CAS Number	LOR	Unit	EP2510792-089	EP2510792-090	EP2510792-091	EP2510792-092	EP2510792-093	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content		----	0.1	%	2.6	5.2	13.5	1.9	4.1
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	0.0009	0.0731	0.0070	0.0005	0.104	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0032	0.0114	<0.0002	0.0023	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0047	0.0021	<0.0002	0.0040	
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	0.0010	
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.0009	0.0004	<0.0002	0.0023	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.0005	0.0008	<0.0002	0.0007	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.0004	0.0006	<0.0002	0.0005	
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									



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD114_250624	0960_SD121_250623	0960_SD122_250623	0960_SD123_250623	0960_SD124_250625
Sampling date / time				24-Jun-2025 08:15	23-Jun-2025 13:11	23-Jun-2025 13:12	23-Jun-2025 13:22	25-Jun-2025 09:38
Compound	CAS Number	LOR	Unit	EP2510792-089	EP2510792-090	EP2510792-091	EP2510792-092	EP2510792-093
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	0.0009	0.0827	0.0223	0.0005	0.115
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0009	0.0731	0.0070	0.0005	0.104
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0009	0.0731	0.0070	0.0005	0.104
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	113	112	102	106	110
13C8-PFOA	----	0.0002	%	108	108	106	116	111

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD125_250625	0960_SD157_250625	0960_SD166_250625	0960_SD168_250625	0960_SD170_250625
Sampling date / time				25-Jun-2025 09:23	25-Jun-2025 14:41	25-Jun-2025 10:37	25-Jun-2025 10:55	25-Jun-2025 14:57	
Compound	CAS Number	LOR	Unit	EP2510792-094	EP2510792-095	EP2510792-096	EP2510792-097	EP2510792-098	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	3.9	12.0	2.9	24.0	8.7	
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	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	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	0.0062	0.0030	0.0005	0.0028	0.0012	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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	<0.0002	<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									



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD125_250625	0960_SD157_250625	0960_SD166_250625	0960_SD168_250625	0960_SD170_250625
Sampling date / time				25-Jun-2025 09:23	25-Jun-2025 14:41	25-Jun-2025 10:37	25-Jun-2025 10:55	25-Jun-2025 14:57
Compound	CAS Number	LOR	Unit	EP2510792-094	EP2510792-095	EP2510792-096	EP2510792-097	EP2510792-098
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	0.0064	0.0034	0.0005	0.0028	0.0012
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0062	0.0034	0.0005	0.0028	0.0012
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0062	0.0034	0.0005	0.0028	0.0012
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	112	108	108	110	113
13C8-PFOA	----	0.0002	%	110	106	108	106	109

Sub-Matrix: **SEDIMENT**
(Matrix: **SOIL**)

0960_SD174_250625	0960_SD176_250625	0960_SD189_250625	0960_SD190_250626	0960_SD192_250626
25-Jun-2025 09:54	25-Jun-2025 12:10	25-Jun-2025 08:01	26-Jun-2025 15:59	26-Jun-2025 15:26
EP2510792-099	EP2510792-100	EP2510792-101	EP2510792-102	EP2510792-103
Result	Result	Result	Result	Result

Moisture Content	----	0.1	%	2.9	4.0	28.4	31.9	41.0
------------------	------	-----	---	-----	-----	------	------	------

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	0.0097	0.0055	0.0016	0.0198	0.0004
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0008	<0.0002
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0003	<0.0002	<0.0002	0.0008	<0.0002

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	<0.0002	<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



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD174_250625	0960_SD176_250625	0960_SD189_250625	0960_SD190_250626	0960_SD192_250626
Sampling date / time				25-Jun-2025 09:54	25-Jun-2025 12:10	25-Jun-2025 08:01	26-Jun-2025 15:59	26-Jun-2025 15:26	
Compound	CAS Number	LOR	Unit	EP2510792-099	EP2510792-100	EP2510792-101	EP2510792-102	EP2510792-103	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0100	0.0055	0.0016	0.0214	0.0004	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0097	0.0055	0.0016	0.0198	0.0004	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0097	0.0055	0.0016	0.0198	0.0004	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	103	112	112	102	107	
13C8-PFOA	----	0.0002	%	108	108	106	102	95.0	

Sub-Matrix: **SEDIMENT**
(Matrix: **SOIL**)

0960_SD193_250626	0960_SD231_350624	0960_SD234_250624	0960_SD235_250624	0960_SD243_250625
26-Jun-2025 15:27	24-Jun-2025 08:51	24-Jun-2025 08:29	24-Jun-2025 11:10	25-Jun-2025 10:02
EP2510792-104	EP2510792-105	EP2510792-106	EP2510792-107	EP2510792-108
Result	Result	Result	Result	Result

Moisture Content	----	0.1	%	34.2	5.4	4.6	9.8	4.8
------------------	------	-----	---	------	-----	-----	-----	-----

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	0.0003	<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	0.0004	0.0391	0.0931	0.0024	0.0135
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0005	0.0006	<0.0002	0.0004
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0023	0.0026	<0.0002	0.0005

Chemical Name	CAS No.	EC No.	Unit	Concentration (mg/kg)	Concentration (mg/kg)	Concentration (mg/kg)	Concentration (mg/kg)	Concentration (mg/kg)
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	0.0003	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0009	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.0008	0.0009	<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	0.0004	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	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



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD193_250626	0960_SD231_350624	0960_SD234_250624	0960_SD235_250624	0960_SD243_250625
Sampling date / time				26-Jun-2025 15:27	24-Jun-2025 08:51	24-Jun-2025 08:29	24-Jun-2025 11:10	25-Jun-2025 10:02	
Compound	CAS Number	LOR	Unit	EP2510792-104	EP2510792-105	EP2510792-106	EP2510792-107	EP2510792-108	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0004	0.0427	0.0991	0.0024	0.0144	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0004	0.0391	0.0934	0.0024	0.0135	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0004	0.0391	0.0937	0.0024	0.0135	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	108	111	110	96.0	98.5	
13C8-PFOA	----	0.0002	%	105	99.5	103	95.5	100	



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD265_250625	0960_SD277_250625	0960_SD298_250628	0960_SD279_250625	0960_SD288_250626
Sampling date / time				25-Jun-2025 14:29	01-Jul-2025 07:30	28-Jun-2025 12:45	25-Jun-2025 11:05	26-Jun-2025 14:38
Compound	CAS Number	LOR	Unit	EP2510792-109	EP2510792-110	EP2510792-111	EP2510792-112	EP2510792-113
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	0.0145	0.0053	<0.0002	0.0103	0.0005
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0117	0.0053	<0.0002	0.0103	0.0005
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0117	0.0053	<0.0002	0.0103	0.0005
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	102	110	110	103	108
13C8-PFOA	----	0.0002	%	108	107	108	105	106

Sub-Matrix: **SEDIMENT**
(Matrix: **SOIL**)

0960_SD291_250624	0960_SD292_250624	0960_SD293_250624	0960_SD278_250625	0960_SD205_250629
24-Jun-2025 14:27	24-Jun-2025 14:44	24-Jun-2025 15:01	25-Jun-2025 09:14	29-Jun-2025 11:24
EP2510792-114	EP2510792-115	EP2510792-116	EP2510792-117	EP2510792-118
Result	Result	Result	Result	Result

Moisture Content	----	0.1	%	13.5	21.9	19.2	4.4	36.1
------------------	------	-----	---	------	------	------	-----	------

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	0.0020	0.0024	0.0029	0.0050	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0003	<0.0002	<0.0002
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0002	<0.0002

Chemical Name	CAS No.	EC No.	Unit	Concentration (mg/kg)	Concentration (mg/kg)	Concentration (mg/kg)	Concentration (mg/kg)	Concentration (mg/kg)
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	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD291_250624	0960_SD292_250624	0960_SD293_250624	0960_SD278_250625	0960_SD205_250629
Sampling date / time				24-Jun-2025 14:27	24-Jun-2025 14:44	24-Jun-2025 15:01	25-Jun-2025 09:14	29-Jun-2025 11:24
Compound	CAS Number	LOR	Unit	EP2510792-114	EP2510792-115	EP2510792-116	EP2510792-117	EP2510792-118
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	0.0020	0.0024	0.0032	0.0052	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0020	0.0024	0.0029	0.0050	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0020	0.0024	0.0029	0.0050	<0.0002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	102	106	104	104	105
13C8-PFOA	----	0.0002	%	106	103	104	98.0	104



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD207_250628	0960_SD208_250630	0960_SD209_250627	0960_SD210_250624	0960_SD211_250627
Sampling date / time					28-Jun-2025 10:43	30-Jun-2025 11:45	27-Jun-2025 14:13	24-Jun-2025 15:43	27-Jun-2025 14:13
Compound	CAS Number	LOR	Unit	EP2510792-119	EP2510792-120	EP2510792-121	EP2510792-122	EP2510792-123	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0105	0.0016	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0105	0.0016	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0105	0.0016	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	102	102	104	95.5	104	
13C8-PFOA	----	0.0002	%	106	104	102	91.0	105	



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD300_250629	0960_SD301_250629	0960_SD302_250625	0960_SD303_250629	0960_SD304_250629
Sampling date / time				29-Jun-2025 15:10	29-Jun-2025 15:33	25-Jun-2025 16:39	29-Jun-2025 17:18	29-Jun-2025 17:35	
Compound	CAS Number	LOR	Unit	EP2510792-124	EP2510792-125	EP2510792-126	EP2510792-127	EP2510792-128	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0022	<0.0002	0.0011	<0.0002	<0.0002	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0022	<0.0002	0.0011	<0.0002	<0.0002	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0022	<0.0002	0.0011	<0.0002	<0.0002	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%	107	114	108	108	110	
13C8-PFOA	----	0.0002	%	104	114	106	99.5	106	

Sub-Matrix: **SEDIMENT**
(Matrix: **SOIL**)

Sample ID

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0960_SD305_250627	0960_SD009_250628	0960_SD198_250624	0960_QC104_250625	0960_QC107_250626
Sampling date / time				27-Jun-2025 14:59	28-Jun-2025 13:16	24-Jun-2025 15:11	25-Jun-2025 10:54	26-Jun-2025 15:36	
Compound	CAS Number	LOR	Unit	EP2510792-129	EP2510792-130	EP2510792-136	EP2510792-139	EP2510792-150	
				Result	Result	Result	Result	Result	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	27.3	25.4	6.5	23.5	41.8	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
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	<0.0002	<0.0002	<0.0002	0.0029	0.0003	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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	<0.0002	<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									



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0960_SD305_250627	0960_SD009_250628	0960_SD198_250624	0960_QC104_250625	0960_QC107_250626
Sampling date / time				27-Jun-2025 14:59	28-Jun-2025 13:16	24-Jun-2025 15:11	25-Jun-2025 10:54	26-Jun-2025 15:36
Compound	CAS Number	LOR	Unit	EP2510792-129	EP2510792-130	EP2510792-136	EP2510792-139	EP2510792-150
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0029	0.0003
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0029	0.0003
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0029	0.0003
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	115	124	118	108	125
13C8-PFOA	----	0.0002	%	101	102	102	93.5	97.5

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0960_QC109_250628	----	----	----	----
Sampling date / time				28-Jun-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EP2510792-176	-----	-----	-----	-----
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content		----	0.1	%	9.0	---	---	---
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	0.0006	---	---	---	---
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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								



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0960_QC109_250628

Sampling date / time

28-Jun-2025 00:00

Compound

CAS Number

LOR

Unit

EP2510792-176

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.0002	mg/kg	0.0006	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0006	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0006	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.0002	%	106	----	----	----	----
13C8-PFOA	----	0.0002	%	104	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0960_QC103_250624	----	----	----	----
Sampling date / time				24-Jun-2025 14:45	----	----	----	----
Compound	CAS Number	LOR	Unit	EP2510792-134	-----	-----	-----	-----
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content		----	0.1	%	22.1	---	---	---
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	0.0030	---	---	---	---
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	---	---	---	---
Perfluorononane sulfonic acid (PFNS)	68259-12-1	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								



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0960_QC103_250624	----	----	----	----
Sampling date / time					24-Jun-2025 14:45	----	----	----	----
Compound	CAS Number	LOR	Unit		EP2510792-134	-----	-----	-----	-----
				Result		----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		0.0030	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0030	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0030	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		108	----	----	----	----
13C8-PFOA	----	0.0002	%		90.0	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW192_250626	0960_SW193_250626	0960_SW001_250629	0960_SW205_0629	0960_SW207_250628
Sampling date / time				26-Jun-2025 15:25	26-Jun-2025 15:15	29-Jun-2025 15:34	29-Jun-2025 11:25	28-Jun-2025 10:41
Compound	CAS Number	LOR	Unit	EP2510792-070	EP2510792-071	EP2510792-072	EP2510792-073	EP2510792-074
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	----	----	----	----
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	0.0005	µg/L	<0.0005	----	----	----	----
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	0.0005	µg/L	<0.0005	----	----	----	----
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	0.0005	µg/L	<0.0005	----	----	----	----
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	0.0002	µg/L	0.0053	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	0.02	<0.01	<0.01	<0.01
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	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



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW192_250626	0960_SW193_250626	0960_SW001_250629	0960_SW205_0629	0960_SW207_250628
Sampling date / time				26-Jun-2025 15:25	26-Jun-2025 15:15	29-Jun-2025 15:34	29-Jun-2025 11:25	28-Jun-2025 10:41
Compound	CAS Number	LOR	Unit	EP2510792-070	EP2510792-071	EP2510792-072	EP2510792-073	EP2510792-074
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
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
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0080	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0018	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW192_250626	0960_SW193_250626	0960_SW001_250629	0960_SW205_0629	0960_SW207_250628
Sampling date / time				26-Jun-2025 15:25	26-Jun-2025 15:15	29-Jun-2025 15:34	29-Jun-2025 11:25	28-Jun-2025 10:41
Compound	CAS Number	LOR	Unit	EP2510792-070	EP2510792-071	EP2510792-072	EP2510792-073	EP2510792-074
				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
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
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	----	----	----	----
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



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW192_250626	0960_SW193_250626	0960_SW001_250629	0960_SW205_0629	0960_SW207_250628
Sampling date / time				26-Jun-2025 15:25	26-Jun-2025 15:15	29-Jun-2025 15:34	29-Jun-2025 11:25	28-Jun-2025 10:41
Compound	CAS Number	LOR	Unit	EP2510792-070	EP2510792-071	EP2510792-072	EP2510792-073	EP2510792-074
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
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	0.001	µg/L	<0.001	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	----	0.02	<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
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	0.02	<0.01	<0.01	<0.01
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0053	----	----	----	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0053	----	----	----	----
^ Sum of PFAS	----	0.0002	µg/L	0.0053	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	----	103	98.3	107	99.6
13C8-PFOA	----	0.02	%	----	104	100	105	103
13C4-PFOS	----	0.0005	%	100	----	----	----	----
13C8-PFOA	----	0.0005	%	108	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW208_250630	0960_SW209_250627	0960_SW211_250627	0960_SW300_250629	0960_SW301_250628
Sampling date / time					30-Jun-2025 11:44	27-Jun-2025 14:14	27-Jun-2025 13:47	29-Jun-2025 15:10	28-Jun-2025 13:15
Compound	CAS Number	LOR	Unit	EP2510792-075	EP2510792-076	EP2510792-077	EP2510792-078	EP2510792-079	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	----	<0.0020	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	----	<0.02	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	----	<0.02	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	----	<0.02	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	0.0007	----	<0.0005	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	----	<0.01	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	----	<0.02	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.0004	0.0173	----	0.0003	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	<0.0005	0.0006	----	<0.0005	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	----	<0.01	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	----	<0.02	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	----	<0.02	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	----	<0.1	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	----	<0.02	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW208_250630	0960_SW209_250627	0960_SW211_250627	0960_SW300_250629	0960_SW301_250628
Sampling date / time				30-Jun-2025 11:44	27-Jun-2025 14:14	27-Jun-2025 13:47	29-Jun-2025 15:10	28-Jun-2025 13:15
Compound	CAS Number	LOR	Unit	EP2510792-075	EP2510792-076	EP2510792-077	EP2510792-078	EP2510792-079
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	----	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	----	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	----	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	----	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	----	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	----	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	----	<0.02	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	----	----	----	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	----	<0.05	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	----	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	----	<0.02	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW208_250630	0960_SW209_250627	0960_SW211_250627	0960_SW300_250629	0960_SW301_250628
Sampling date / time					30-Jun-2025 11:44	27-Jun-2025 14:14	27-Jun-2025 13:47	29-Jun-2025 15:10	28-Jun-2025 13:15
Compound	CAS Number	LOR	Unit	EP2510792-075	EP2510792-076	EP2510792-077	EP2510792-078	EP2510792-079	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
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	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	----	<0.0005	
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	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW208_250630	0960_SW209_250627	0960_SW211_250627	0960_SW300_250629	0960_SW301_250628
Sampling date / time				30-Jun-2025 11:44	27-Jun-2025 14:14	27-Jun-2025 13:47	29-Jun-2025 15:10	28-Jun-2025 13:15
Compound	CAS Number	LOR	Unit	EP2510792-075	EP2510792-076	EP2510792-077	EP2510792-078	EP2510792-079
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
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	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001
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	----
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	0.0004	0.0180	----	0.0003
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	0.0004	0.0180	----	0.0003
^ Sum of PFAS	----	0.0002	µg/L	<0.0002	0.0004	0.0186	----	0.0003
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	----	----	----	99.1	----
13C8-PFOA	----	0.02	%	----	----	----	98.3	----
13C4-PFOS	----	0.0005	%	100	99.8	98.1	----	101
13C8-PFOA	----	0.0005	%	103	103	106	----	108



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0960_SW302_250625	0960_SW304_250629	0960_SW305_250627	----	----
Sampling date / time					25-Jun-2025 16:38	29-Jun-2025 17:34	27-Jun-2025 15:00	----	----
Compound	CAS Number	LOR	Unit	EP2510792-080	EP2510792-082	EP2510792-083	-----	-----	
				Result	Result	Result	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	----	----	<0.0020	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	----	----	<0.0005	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	----	----	<0.0005	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	----	----	<0.0005	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	----	----	<0.0005	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	----	----	0.0002	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	----	----	<0.0005	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	----	----	<0.0005	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	<0.01	----	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW302_250625	0960_SW304_250629	0960_SW305_250627	----	----
Sampling date / time				25-Jun-2025 16:38	29-Jun-2025 17:34	27-Jun-2025 15:00	----	----
Compound	CAS Number	LOR	Unit	EP2510792-080	EP2510792-082	EP2510792-083	-----	-----
				Result	Result	Result	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
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 (PFTTrDA)	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	----	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	----	----	<0.0020	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	----	----	<0.0005	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	----	----	<0.0005	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	----	----	<0.0005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	----	----	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW302_250625	0960_SW304_250629	0960_SW305_250627	----	----
Sampling date / time				25-Jun-2025 16:38	29-Jun-2025 17:34	27-Jun-2025 15:00	----	----
Compound	CAS Number	LOR	Unit	EP2510792-080	EP2510792-082	EP2510792-083	-----	-----
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	----	----	<0.001	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	----	----	<0.001	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	----	----	<0.001	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	----	----	<0.001	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	----	----	<0.0005	----	----
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	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0960_SW302_250625	0960_SW304_250629	0960_SW305_250627	----	----
Sampling date / time				25-Jun-2025 16:38	29-Jun-2025 17:34	27-Jun-2025 15:00	----	----
Compound	CAS Number	LOR	Unit	EP2510792-080	EP2510792-082	EP2510792-083	-----	-----
				Result	Result	Result	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
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	----	----	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	----	----	<0.001	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	----	----	<0.001	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	----	----	<0.001	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	----	----	<0.001	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	0.02	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.02	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.02	<0.01	----	----	----
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	----	----	0.0002	----	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	----	----	0.0002	----	----
^ Sum of PFAS	----	0.0002	µg/L	----	----	0.0002	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	100	92.4	----	----	----
13C8-PFOA	----	0.02	%	97.5	97.9	----	----	----
13C4-PFOS	----	0.0005	%	----	----	99.6	----	----
13C8-PFOA	----	0.0005	%	----	----	102	----	----

Sub-Matrix: WATER
(Matrix: WATER)

0960_OTH132_25063 0	0960_OTH134_25063 0	0960_OTH129_25063 0	0960_OTH103_25063 0	0960_OTH106_25062 9
30-Jun-2025 14:00	30-Jun-2025 13:37	30-Jun-2025 12:18	30-Jun-2025 11:41	29-Jun-2025 12:23
EP2510792-064	EP2510792-065	EP2510792-066	EP2510792-067	EP2510792-068
Result	Result	Result	Result	Result

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0002	0.0005	<0.0002	0.0011	0.0037
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	0.0007	0.0011
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	0.0016	0.0034
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	0.0008	0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0960_OTH132_25063 0	0960_OTH134_25063 0	0960_OTH129_25063 0	0960_OTH103_25063 0	0960_OTH106_25062 9
Sampling date / time				30-Jun-2025 14:00	30-Jun-2025 13:37	30-Jun-2025 12:18	30-Jun-2025 11:41	29-Jun-2025 12:23	
Compound	CAS Number	LOR	Unit	EP2510792-064	EP2510792-065	EP2510792-066	EP2510792-067	EP2510792-068	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
EP231P: PFAS Sums									
^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0002	0.0005	<0.0002	0.0011	0.0037	
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0002	0.0005	<0.0002	0.0034	0.0082	
^ Sum of PFAS	----	0.0002	µg/L	0.0002	0.0005	<0.0002	0.0042	0.0087	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0005	%	104	102	102	117	101	
13C8-PFOA	----	0.0005	%	91.9	105	105	88.3	85.2	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0960_OTH107_25062
9

Sampling date / time

29-Jun-2025 12:46

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

EP2510792-069

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L	<0.0020	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0003	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L	<0.0020	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0960_OTH107_25062
9

Sampling date / time

29-Jun-2025 12:46

Compound CAS Number LOR Unit

EP2510792-069

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	----	----	----	----

EP231P: PFAS Sums

^ Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0003	----	----	----	----
^ Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0003	----	----	----	----
^ Sum of PFAS	----	0.0002	µg/L	0.0003	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.0005	%	98.1	----	----	----	----
13C8-PFOA	----	0.0005	%	90.1	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

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: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

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	: EP2510792	Page	: 1 of 56
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 999 HAY STREET PERTH WA, AUSTRALIA 6000	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: WA_0960_PFASOMP_25	Date Samples Received	: 07-Jul-2025
Order number	: 12641234/02.2.8	Date Analysis Commenced	: 09-Jul-2025
C-O-C number	: 79896	Issue Date	: 17-Jul-2025
Sampler	: [REDACTED]		
Site	: 0960		
Quote number	: EP24GHDSE0016_V5		
No. of samples received	: 170		
No. of samples analysed	: 169		



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]	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	SENIOR LAB TECH	Perth Organics, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA



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: 6714281)									
EP2510792-084	0960_SD199_250628	EA055: Moisture Content	----	0.1	%	13.9	13.5	3.1	0% - 20%
EP2510792-094	0960_SD125_250625	EA055: Moisture Content	----	0.1	%	3.9	3.8	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6714282)									
EP2510792-104	0960_SD193_250626	EA055: Moisture Content	----	0.1	%	34.2	34.1	0.5	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6714283)									
EP2510792-109	0960_SD265_250625	EA055: Moisture Content	----	0.1	%	20.9	21.8	4.5	0% - 20%
EP2510792-119	0960_SD207_250628	EA055: Moisture Content	----	0.1	%	25.3	24.1	5.2	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6714284)									
EP2510792-129	0960_SD305_250627	EA055: Moisture Content	----	0.1	%	27.3	27.7	1.2	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6716943)									
EP2510792-176	0960_QC109_250628	EA055: Moisture Content	----	0.1	%	9.0	8.7	2.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710798)									
EP2510592-045	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	0.0009	0.0010	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2510592-049	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



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: 6710798) - continued									
EP2510592-049	Anonymous	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710802)									
EP2510792-089	0960_SD114_250624	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0009	0.0010	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2510792-099	0960_SD174_250625	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	0.0097	0.0094	2.7	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0003	0.0004	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: 6710808)									
EP2510792-109	0960_SD265_250625	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	0.0114	0.0114	0.0	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0009	0.0005	52.6	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0011	0.0006	54.9	No Limit
EP2510792-119	0960_SD207_250628	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710811)									
EP2510792-129	0960_SD305_250627	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



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: 6710811) - continued									
EP2510792-129	0960_SD305_250627	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6716692)									
EP2510792-176	0960_QC109_250628	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	0.0006	0.0005	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP2510978-025	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: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710798)									
EP2510592-045	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
EP2510592-049	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



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: 6710798) - continued									
EP2510592-049	Anonymous	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: 6710802)									
EP2510792-089	0960_SD114_250624	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
EP2510792-099	0960_SD174_250625	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: 6710808)									
EP2510792-109	0960_SD265_250625	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: 6710808) - continued									
EP2510792-109	0960_SD265_250625	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	0.0004	<0.0002	58.6	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
EP2510792-119	0960_SD207_250628	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: 6710811)							
EP2510792-129	0960_SD305_250627	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: 6716692)									
EP2510792-176	0960_QC109_250628	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



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: 6716692) - continued									
EP2510792-176	0960_QC109_250628	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
EP2510978-025	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
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710798)									
EP2510592-045	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
EP2510592-049	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



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: 6710802)									
EP2510792-089	0960_SD114_250624	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
EP2510792-099	0960_SD174_250625	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: 6710808)									
EP2510792-109	0960_SD265_250625	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
EP2510792-119	0960_SD207_250628	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710808) - continued									
EP2510792-119	0960_SD207_250628	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: 6710811)									
EP2510792-129	0960_SD305_250627	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: 6716692)									
EP2510792-176	0960_QC109_250628	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
EP2510978-025	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6716692) - continued									
EP2510978-025	Anonymous	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: 6710798)									
EP2510592-045	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
EP2510592-049	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: 6710802)									
EP2510792-089	0960_SD114_250624	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
EP2510792-099	0960_SD174_250625	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	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: 6710802) - continued									
EP2510792-099	0960_SD174_250625	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: 6710808)									
EP2510792-109	0960_SD265_250625	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
EP2510792-119	0960_SD207_250628	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: 6710811)									
EP2510792-129	0960_SD305_250627	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: 6716692)									
EP2510792-176	0960_QC109_250628	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: 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: 6716692) - continued									
EP2510978-025	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
EP231P: PFAS Sums (QC Lot: 6710798)									
EP2510592-045	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0009	0.0010	10.5	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0009	0.0010	10.5	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0009	0.0010	10.5	No Limit
EP2510592-049	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6710802)									
EP2510792-089	0960_SD114_250624	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0009	0.0010	10.5	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0009	0.0010	10.5	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0009	0.0010	10.5	No Limit
EP2510792-099	0960_SD174_250625	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0100	0.0100	0.0	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0097	0.0094	3.1	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0097	0.0094	3.1	0% - 20%
EP231P: PFAS Sums (QC Lot: 6710808)									
EP2510792-109	0960_SD265_250625	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0145	0.0128	12.5	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0117	0.0117	0.0	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0117	0.0117	0.0	0% - 20%
EP2510792-119	0960_SD207_250628	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6710811)									
EP2510792-129	0960_SD305_250627	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	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 (%)
EP231P: PFAS Sums (QC Lot: 6710811) - continued									
EP2510792-129	0960_SD305_250627	EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6716692)									
EP2510792-176	0960_QC109_250628	EP231X: Sum of PFAS	----	0.0002	mg/kg	0.0006	0.0005	18.2	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0006	0.0005	18.2	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0006	0.0005	18.2	No Limit
EP2510978-025	Anonymous	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	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: 6710265)									
EP2510527-016	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: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP2510792-002	0960_MW113_250623	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710281)									
EP2510792-013	0960_MW112_250623	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.35	0.32	11.1	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.44	0.39	11.7	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit

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: 6710281) - continued									
EP2510792-013	0960_MW112_250623	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710286)									
EP2510792-031	0960_MW102_250625	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710313)									
EP2510592-011	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.003	0.002	35.9	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.007	0.005	38.5	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710319)									
EP2510592-069	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6710425)									



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: 6710425) - continued									
EP2510527-097	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.19	1.18	1.4	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	5.24	5.35	2.0	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.03	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
EP2510792-073	0960_SW205_0629	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710265)									
EP2510527-016	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	0.03	0.04	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP2510792-002	0960_MW113_250623	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit



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: 6710265) - continued									
EP2510792-002	0960_MW113_250623	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710281)									
EP2510792-013	0960_MW112_250623	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	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710286)									
EP2510792-031	0960_MW102_250625	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710313)									
EP2510592-011	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit



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: 6710313) - continued									
EP2510592-011	Anonymous	EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710319)									
EP2510592-069	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710425)									
EP2510527-097	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.63	0.64	0.0	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	1.21	1.22	0.0	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.35	1.37	1.6	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.87	0.88	0.0	0% - 20%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.4	0.4	0.0	No Limit
EP2510792-073	0960_SW205_0629	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6710425) - continued									
EP2510792-073	0960_SW205_0629	EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710265)									
EP2510527-016	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
EP2510792-002	0960_MW113_250623	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710281)									
EP2510792-013	0960_MW112_250623	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



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: 6710281) - continued									
EP2510792-013	0960_MW112_250623	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710286)									
EP2510792-031	0960_MW102_250625	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710313)							
EP2510592-011	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710319)									
EP2510592-069	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710319) - continued									
EP2510592-069	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6710425)									
EP2510527-097	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
EP2510792-073	0960_SW205_0629	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: 6710265)									
EP2510527-016	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	0.06	0.06	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710265) - continued									
EP2510527-016	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP2510792-002	0960_MW113_250623	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710281)									
EP2510792-013	0960_MW112_250623	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710286)									
EP2510792-031	0960_MW102_250625	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710313)									
EP2510592-011	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710319)									
EP2510592-069	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710319) - continued									
EP2510592-069	Anonymous	EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6710425)									
EP2510527-097	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	3.66	3.74	2.3	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	0.11	0.11	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
EP2510792-073	0960_SW205_0629	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: 6710265)									
EP2510527-016	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.23	0.24	4.3	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.23	0.24	4.3	0% - 20%
EP2510792-002	0960_MW113_250623	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
EP231P: PFAS Sums (QC Lot: 6710281)									
EP2510792-013	0960_MW112_250623	EP231X: Sum of PFAS	----	0.01	µg/L	0.92	0.83	10.3	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.79	0.71	10.7	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	0.89	0.80	10.7	0% - 20%
EP231P: PFAS Sums (QC Lot: 6710286)									
EP2510792-031	0960_MW102_250625	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit

Page : 23 of 56
 Work Order : EP2510792
 Client : GHD PTY LTD
 Project : WA_0960_PFASOMP_25



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 6710286) - continued									
EP2510792-031	0960_MW102_250625	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
EP231P: PFAS Sums (QC Lot: 6710313)									
EP2510592-011	Anonymous	EP231X-LL: Sum of PFAS	----	0.002	µg/L	0.010	0.007	35.3	No Limit
		EP231X-LL: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.010	0.007	35.3	No Limit
		EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	0.010	0.007	35.3	No Limit
EP231P: PFAS Sums (QC Lot: 6710319)									
EP2510592-069	Anonymous	EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6710425)									
EP2510527-097	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	14.9	15.1	1.5	0% - 20%
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	6.43	6.53	1.5	0% - 20%
		EP231X: Sum of PFAS (WA DER List)	----	0.01	µg/L	14.7	14.9	1.5	0% - 20%
EP2510792-073	0960_SW205_0629	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: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710798)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	92.7	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	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	96.6	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	99.6	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	95.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	101	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710802)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	93.2	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.8	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	77.1	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	106	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	87.1	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	110	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	102	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710808)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	95.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.8	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	91.9	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	90.9	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	100	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	99.2	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710811)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	100	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	94.5	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	103	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	95.7	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	117	70.0	130

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710811) - continued								
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	109	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6716692)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	86.8	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	73.2	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	74.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	92.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	82.3	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0012 mg/kg	92.5	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	87.9	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710798)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	92.9	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	95.6	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.2	69.0	135
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	97.2	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710802)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	97.4	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	88.0	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	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	90.0	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	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 (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	118	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710808)								



Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710808) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	99.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.0	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.2	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	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	104	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	95.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.2	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	100	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710811)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	99.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.6	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	106	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	122	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	135
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6716692)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	87.1	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.0	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	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	85.2	69.0	135
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.2	66.0	139

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6716692) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00125 mg/kg	96.0	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710798)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.8	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	105	61.9	139
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	91.6	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710802)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	128	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	105	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.4	61.9	139
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	108	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710808)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	94.6	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	106	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	61.9	139
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710811)								



Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710811) - continued								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	61.9	139
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6716692)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	81.7	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	78.4	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	92.5	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	84.3	61.9	139
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	96.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710798)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	98.7	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	104	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	98.8	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	108	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710802)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	98.7	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	114	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	110	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	105	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710808)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	100	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	113	64.0	140



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710808) - continued								
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	97.9	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710811)								
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	121	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	118	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	114	54.8	124
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6716692)								
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	96.6	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	98.8	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	83.3	54.8	124
EP231P: PFAS Sums (QCLot: 6710798)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6710802)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6710808)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6710811)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6716692)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710265)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	102	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	109	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	93.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	105	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	99.1	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	116	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	111	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710281)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	104	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	90.1	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	80.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	108	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	91.8	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	99.4	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	92.3	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710286)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	85.9	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	92.7	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	87.2	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	88.0	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	86.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	87.1	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	86.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710287)								



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710287) - continued								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	104	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	101	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	93.1	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	104	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	91.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	99.4	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	96.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710313)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	107	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	104	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	97.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	93.7	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	105	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	103	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	107	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710319)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	117	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	105	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	97.9	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	91.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	102	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	122	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710326)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	91.4	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	80.6	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	99.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	92.8	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	101	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	97.8	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	96.7	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710334)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	92.9	70.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710334) - continued								
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	92.6	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	86.0	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	76.0	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	86.9	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	90.6	65.0	140
EP231X-SUT: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	0.00384 µg/L	92.5	70.0	130
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	88.5	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710337)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	99.0	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	94.9	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	95.7	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	85.7	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	85.7	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	88.4	65.0	140
EP231X-SUT: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	0.00384 µg/L	92.1	70.0	130
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	86.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710376)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	95.5	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	102	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	109	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	96.2	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	104	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	98.3	65.0	140
EP231X-SUT: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	0.00384 µg/L	122	70.0	130
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	114	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710380)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.00367 µg/L	106	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.00354 µg/L	95.8	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.00376 µg/L	86.8	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.00381 µg/L	86.5	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.00381 µg/L	96.2	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.00371 µg/L	93.2	65.0	140
EP231X-SUT: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0005	µg/L	<0.0005	0.00384 µg/L	99.6	70.0	130
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.00385 µg/L	91.4	53.0	142



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710425)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	91.7	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	87.4	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	86.0	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	93.9	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	89.0	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	91.0	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	97.7	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6717580)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.2218 µg/L	89.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.2352 µg/L	103	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.2373 µg/L	90.8	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	96.4	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	86.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.24 µg/L	95.4	70.0	135
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	84.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6717823)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02298 µg/L	81.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.0222 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.0235 µg/L	95.7	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.0237 µg/L	93.2	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.0238 µg/L	92.8	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.0232 µg/L	99.1	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.0241 µg/L	99.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710265)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	111	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	96.0	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	102	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	124	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	87.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710265) - continued								
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	111	72.0	134
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	102	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	95.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710281)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	100	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	94.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	107	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	93.2	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	120	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	96.0	72.0	134
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	102	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710286)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	86.1	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	86.8	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	87.6	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	86.6	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	89.2	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	84.6	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	91.8	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 (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.0	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	92.4	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710287)								
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	96.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	99.2	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	96.8	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



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710287) - continued								
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	96.8	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	104	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	89.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710313)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	101	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	102	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	102	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	96.8	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	97.6	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	106	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	102	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	102	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	106	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	102	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.6	38.8	149
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710319)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	114	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	104	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	107	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	106	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	114	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	109	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	107	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	107	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	97.6	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	103	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	104	38.8	149
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710326)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	95.0	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	98.0	72.0	129



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710326) - continued								
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	94.4	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	99.2	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	94.4	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	92.8	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	100	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	102	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDODA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	98.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	98.0	38.8	149
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710334)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	95.8	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	90.8	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	88.8	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	90.0	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	117	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	92.0	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	123	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	107	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDODA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	89.2	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	94.8	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	102	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710337)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	98.8	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	84.4	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	98.4	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	92.8	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	93.2	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	106	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	84.8	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	88.8	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDODA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	90.0	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	83.2	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	85.6	71.0	132



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710376)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	112	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	103	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	111	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	106	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	101	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	112	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	96.4	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	106	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	117	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	114	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	84.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710380)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	94.5	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	96.0	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	94.8	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	96.4	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	88.8	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	95.6	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	90.4	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	104	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	90.8	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	106	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.004 µg/L	93.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710425)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	89.4	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	92.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	88.8	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	93.4	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	91.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	88.2	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	97.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	105	65.0	144



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710425) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.25 µg/L	94.0	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6717580)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	92.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	95.6	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	99.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	103	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	97.0	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	96.2	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	0.25 µg/L	95.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6717823)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	89.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	96.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	88.0	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	90.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	90.8	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	99.2	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	109	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	104	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	94.0	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	85.2	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.025 µg/L	102	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	121	38.8	149
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710265)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	79.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	117	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	104	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	97.3	62.2	138



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710265) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	110	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	100	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710281)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	115	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	103	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	96.9	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	107	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.9	62.2	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	104	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710286)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	87.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	90.3	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.3	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.2	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	92.2	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	88.0	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	89.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710287)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	84.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	91.6	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.3	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	96.0	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.8	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710287) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	89.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710313)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	100	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	110	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	106	57.9	141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	118	63.3	134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	116	60.0	136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	104	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	92.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710319)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	99.2	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	120	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	95.4	57.9	141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	118	63.3	134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	117	60.0	136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	100	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	113	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710326)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	98.0	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	99.5	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	103	57.9	141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	95.5	63.3	134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	113	60.0	136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	97.6	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710326) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	95.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710334)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	107	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	87.8	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	86.6	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	95.7	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	93.9	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	91.2	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	104	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710337)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	76.8	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	99.7	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	79.4	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	90.7	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	88.8	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	98.0	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	104	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710376)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	79.6	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	104	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	96.3	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	105	63.3	134



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710376) - continued								
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	96.0	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	108	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	109	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710380)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	95.2	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	105	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	94.9	57.9	141
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	105	63.3	134
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	100	60.0	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	96.0	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	100	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710425)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	89.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	96.8	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	89.2	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	96.2	68.3	134
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	97.4	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.2	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	95.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6717580)								
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	110	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	103	60.5	138
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	101	68.3	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6717580) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	99.2	62.2	138
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.2	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	88.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6717823)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	89.2	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	127	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	112	57.9	141
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	99.4	63.3	134
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	99.4	60.0	136
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	98.8	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	122	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710265)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	101	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	118	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	117	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710281)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	96.9	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	108	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	92.1	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710286)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	95.6	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	95.0	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	93.1	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	90.4	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710287)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	90.3	63.0	143

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710287) - continued								
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.2378 µg/L	96.1	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	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	107	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710313)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	106	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	105	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	112	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	100	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710319)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	106	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	92.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	122	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	130	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710326)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	96.6	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	104	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	98.3	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	100	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710334)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	92.4	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	96.0	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	102	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	104	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710337)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	97.5	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	88.8	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	114	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	104	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710376)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	98.8	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	104	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	102	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	117	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710380)								

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710380) - continued								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.00374 µg/L	100	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.0038 µg/L	96.8	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.00384 µg/L	100	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.00386 µg/L	108	53.1	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710425)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	98.8	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	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	94.2	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	92.1	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6717580)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.2343 µg/L	103	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	99.9	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	97.1	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	104	64.2	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6717823)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.0234 µg/L	97.9	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.0238 µg/L	116	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.024 µg/L	94.2	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.0242 µg/L	82.6	53.1	133
EP231P: PFAS Sums (QCLot: 6710265)								
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: 6710281)								
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: 6710286)								
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: 6710287)								



Sub-Matrix: **WATER**

Method Blank (MB) Report				Laboratory Control Spike (LCS) Report				
				Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
					LCS		Low	High
Method: Compound	CAS Number	LOR	Unit	Result				
EP231P: PFAS Sums (QCLot: 6710287) - continued								
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: 6710313)								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6710319)								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6710326)								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
EP231P: PFAS Sums (QCLot: 6710425)								
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: 6717580)								
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: 6717823)								
EP231X-LL: Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.002	µg/L	<0.002	----	----	----	----
EP231X-LL: Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

Matrix Spike (MS) Report



The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710798)							
EP2510592-045	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	93.7	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	105	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	94.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	98.3	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	93.9	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	96.8	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	97.2	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710802)							
EP2510792-090	0960_SD121_250623	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	90.5	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	94.0	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	90.3	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	95.8	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	# Not Determined	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	119	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710808)							
EP2510792-110	0960_SD277_250625	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	97.9	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	96.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	89.6	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	97.1	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	90.6	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	96.0	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710811)							
EP2510792-130	0960_SD009_250628	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	90.9	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	99.2	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	92.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	100	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	104	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	117	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	111	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6716692)							
EP2510792-176	0960_QC109_250628	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	94.1	72.0	128



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6716692) - continued							
EP2510792-176	0960_QC109_250628	EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	81.2	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	80.0	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	100	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	88.2	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0012 mg/kg	98.8	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	84.1	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710798)							
EP2510592-045	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	93.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	101	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	95.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	98.9	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	98.9	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	99.7	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	106	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	105	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	101	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	0.00125 mg/kg	98.7	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710802)							
EP2510792-090	0960_SD121_250623	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	91.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	96.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	86.4	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	91.6	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	94.8	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	90.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	88.1	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	97.6	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	99.2	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710808)							
EP2510792-110	0960_SD277_250625	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	97.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.2	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	94.5	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	93.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	98.5	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	98.6	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	106	69.0	133



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710808) - continued							
EP2510792-110	0960_SD277_250625	EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	98.4	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	96.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	106	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	102	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710811)							
EP2510792-130	0960_SD009_250628	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	108	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	91.2	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	106	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	120	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	90.0	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	97.6	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	94.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	102	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	94.4	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6716692)							
EP2510792-176	0960_QC109_250628	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.3	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	93.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	92.1	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	88.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	123	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	83.2	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	129	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	99.5	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	88.6	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	98.4	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00125 mg/kg	121	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710798)							
EP2510592-045	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	101	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	110	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	101	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	107	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	103	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	104	63.0	144



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: 6710798) - continued							
EP2510592-045	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	93.1	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710802)							
EP2510792-090	0960_SD121_250623	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	128	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	103	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	88.6	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	105	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	102	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	92.4	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710808)							
EP2510792-110	0960_SD277_250625	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	103	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	106	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	88.9	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	111	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	117	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	99.2	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	105	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710811)							
EP2510792-130	0960_SD009_250628	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	87.3	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	118	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	96.1	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	99.0	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	106	63.0	144



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: 6710811) - continued							
EP2510792-130	0960_SD009_250628	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	113	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6716692)							
EP2510792-176	0960_QC109_250628	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	102	48.0	128
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	95.0	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	91.0	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	96.1	60.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	93.0	60.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	104	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	99.2	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710798)							
EP2510592-045	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.3	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	108	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	102	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	107	60.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710802)							
EP2510792-090	0960_SD121_250623	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	100.0	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	99.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	102	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	92.5	60.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710808)							
EP2510792-110	0960_SD277_250625	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	104	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	110	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	118	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	108	60.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710811)							
EP2510792-130	0960_SD009_250628	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	112	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	126	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	122	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	126	60.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6716692)							
EP2510792-176	0960_QC109_250628	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	97.1	62.0	145



Sub-Matrix: SOIL				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: 6716692) - continued							
EP2510792-176	0960_QC109_250628	EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	108	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	103	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	61.5	60.0	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
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710265)							
EP2510527-031	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	97.6	72.0	129
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.232 µg/L	110	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	95.7	68.0	129
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	97.1	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	101	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.24 µg/L	121	70.0	135
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	120	53.0	129
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710286)							
EP2510792-039	0960_MW144A_250626	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	89.9	72.0	129
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.232 µg/L	96.9	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	91.1	68.0	129
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	90.1	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	97.1	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.24 µg/L	98.1	70.0	135
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	89.4	53.0	129
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710319)							
EP2510592-069	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02298 µg/L	116	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0222 µg/L	111	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0235 µg/L	105	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0237 µg/L	96.3	68.0	129
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0238 µg/L	98.7	69.0	130
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0232 µg/L	87.1	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0241 µg/L	93.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710425)							
EP2510592-005	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.2218 µg/L	95.0	72.0	129
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.232 µg/L	96.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.2352 µg/L	97.7	68.0	129
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.238 µg/L	104	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.232 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.24 µg/L	101	70.0	135



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6710425) - continued							
EP2510592-005	Anonymous	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.241 µg/L	98.3	53.0	129
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710265)							
EP2510527-031	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	110	73.0	142
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	99.8	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	99.8	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	104	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	106	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	108	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	89.2	71.0	134
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	103	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	93.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	98.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.25 µg/L	95.6	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710286)							
EP2510792-039	0960_MW144A_250626	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	95.4	73.0	142
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	97.3	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	91.8	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	98.0	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	94.5	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	95.4	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	98.8	71.0	134
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	105	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	99.1	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	101	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.25 µg/L	101	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710319)							
EP2510592-069	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	111	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	106	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	100	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	105	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	104	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	110	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	100.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	111	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	98.4	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	75.6	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.025 µg/L	100.0	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	118	50.0	131



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6710425)							
EP2510592-005	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	101	73.0	142
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	# Not Determined	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	# Not Determined	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	# Not Determined	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	114	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	104	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	101	71.0	134
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	107	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	99.2	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	113	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.25 µg/L	106	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710265)							
EP2510527-031	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	77.8	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	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	97.7	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	98.4	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	109	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	120	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710286)							
EP2510792-039	0960_MW144A_250626	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	95.4	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	98.5	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	101	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	99.8	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	102	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	98.5	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710286) - continued							
EP2510792-039	0960_MW144A_250626	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	92.3	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710319)							
EP2510592-069	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	94.4	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	116	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	104	40.0	130
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	119	50.0	130
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	110	40.0	130
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	106	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	101	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6710425)							
EP2510592-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	103	59.0	135
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	107	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	104	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	116	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	106	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	101	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	105	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710265)							
EP2510527-031	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	100	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	113	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	118	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	126	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710286)							
EP2510792-039	0960_MW144A_250626	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	102	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	105	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	106	67.0	138



Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710286) - continued							
EP2510792-039	0960_MW144A_250626	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	97.9	70.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710319)							
EP2510592-069	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0234 µg/L	112	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0238 µg/L	103	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.024 µg/L	131	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0242 µg/L	104	50.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6710425)							
EP2510592-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.234 µg/L	102	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.2378 µg/L	116	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.24 µg/L	114	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.2415 µg/L	105	70.0	130



QA/QC Compliance Assessment to assist with Quality Review

Work Order : EP2510792

Page : 1 of 33

Client : GHD PTY LTD

Laboratory : Environmental Division Perth

Contact : [REDACTED]

Telephone : +61-8-9406 1301

Project : WA_0960_PFASOMP_25

Date Samples Received : 07-Jul-2025

Site : 0960

Issue Date : 17-Jul-2025

Sampler : [REDACTED]

No. of samples received : 170

Order number : 12641234/02.2.8

No. of samples analysed : 169

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- 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	EP2510792--090	0960_SD121_250623	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	EP2510792--110	0960_SD277_250625	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	EP2510792--090	0960_SD121_250623	Perfluorononane sulfonic acid (PFNS)	68259-12-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EP2510592--005	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EP2510592--005	Anonymous	Perfluoropentanoic acid (PFPeA)	2706-90-3	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EP2510592--005	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	EP2510592--005	Anonymous	Perfluoroheptanoic acid (PFHpA)	375-85-9	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method	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 0960_SD121_250623, 0960_SD123_250623	0960_SD122_250623,	----	----	----	11-Jul-2025	07-Jul-2025 4



Matrix: **SOIL**

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C) - Analysis Holding Time Compliance							
HDPE Soil Jar							
0960_SD219_250624,	0960_SD114_250624,	----	----	----	11-Jul-2025	08-Jul-2025	3
0960_SD231_250624,	0960_SD234_250624,						
0960_SD235_250624,	0960_SD291_250624,						
0960_SD292_250624,	0960_SD293_250624,						
0960_SD210_250624,	0960_QC103_250624,						
0960_SD198_250624							
HDPE Soil Jar							
0960_SD108_250625,	0960_SD113_250625,	----	----	----	11-Jul-2025	09-Jul-2025	2
0960_SD124_250625,	0960_SD125_250625,						
0960_SD157_250625,	0960_SD166_250625,						
0960_SD168_250625,	0960_SD170_250625,						
0960_SD174_250625,	0960_SD176_250625,						
0960_SD189_250625,	0960_SD243_250625,						
0960_SD265_250625,	0960_SD279_250625,						
0960_SD278_250625,	0960_SD302_250625,						
0960_QC104_250625							
HDPE Soil Jar							
0960_SD190_250626,	0960_SD192_250626,	----	----	----	11-Jul-2025	10-Jul-2025	1
0960_SD193_250626,	0960_SD288_250626,						
0960_QC107_250626							
HDPE Soil Jar							
0960_QC109_250628		----	----	----	14-Jul-2025	12-Jul-2025	2

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	26	7.69	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	85	7.06	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	62	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	26	3.85	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	85	3.53	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	62	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	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0960_SD277_250625	01-Jul-2025	----	----	----	11-Jul-2025	15-Jul-2025	✓
HDPE Soil Jar (EA055) 0960_SD121_250623, 0960_SD123_250623	23-Jun-2025	----	----	----	11-Jul-2025	07-Jul-2025	✗
HDPE Soil Jar (EA055) 0960_SD219_250624, 0960_SD231_350624, 0960_SD235_250624, 0960_SD292_250624, 0960_SD210_250624, 0960_SD198_250624	24-Jun-2025	----	----	----	11-Jul-2025	08-Jul-2025	✗
HDPE Soil Jar (EA055) 0960_SD108_250625, 0960_SD124_250625, 0960_SD157_250625, 0960_SD168_250625, 0960_SD174_250625, 0960_SD189_250625, 0960_SD265_250625, 0960_SD278_250625, 0960_QC104_250625	25-Jun-2025	----	----	----	11-Jul-2025	09-Jul-2025	✗
HDPE Soil Jar (EA055) 0960_SD190_250626, 0960_SD193_250626, 0960_QC107_250626	26-Jun-2025	----	----	----	11-Jul-2025	10-Jul-2025	✗
HDPE Soil Jar (EA055) 0960_SD209_250627, 0960_SD305_250627	27-Jun-2025	----	----	----	11-Jul-2025	11-Jul-2025	✓
HDPE Soil Jar (EA055) 0960_SD199_250628, 0960_SD298_250628, 0960_SD009_250628	28-Jun-2025	----	----	----	11-Jul-2025	12-Jul-2025	✓
HDPE Soil Jar (EA055)							

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C) - Continued							
0960_QC109_250628	28-Jun-2025	----	----	----	14-Jul-2025	12-Jul-2025	✗
HDPE Soil Jar (EA055) 0960_SD205_250629, 0960_SD300_250629, 0960_SD301_250629, 0960_SD303_250629, 0960_SD304_250629	29-Jun-2025	----	----	----	11-Jul-2025	13-Jul-2025	✓
HDPE Soil Jar (EA055) 0960_SD208_250630	30-Jun-2025	----	----	----	11-Jul-2025	14-Jul-2025	✓



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0960_SD277_250625	01-Jul-2025	11-Jul-2025	28-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD121_250623, 0960_SD123_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD219_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD114_250624, 0960_SD234_250624, 0960_QC103_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD291_250624, 0960_SD293_250624	24-Jun-2025	11-Jul-2025	21-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD124_250625, 0960_SD157_250625, 0960_SD168_250625, 0960_SD174_250625, 0960_SD189_250625, 0960_QC104_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD265_250625, 0960_SD278_250625	25-Jun-2025	11-Jul-2025	22-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD190_250626, 0960_SD193_250626	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD288_250626	26-Jun-2025	11-Jul-2025	23-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD305_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD209_250627	27-Jun-2025	11-Jul-2025	24-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD009_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD298_250628	28-Jun-2025	11-Jul-2025	25-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_QC109_250628	28-Jun-2025	14-Jul-2025	25-Dec-2025	✔	14-Jul-2025	23-Aug-2025	✔
HDPE Soil Jar (EP231X)							



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0960_SD205_250629, 0960_SD301_250629, 0960_SD304_250629	0960_SD300_250629, 0960_SD303_250629,	29-Jun-2025	11-Jul-2025	26-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD208_250630		30-Jun-2025	11-Jul-2025	27-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0960_SD277_250625	01-Jul-2025	11-Jul-2025	28-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD121_250623, 0960_SD123_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD219_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD114_250624, 0960_SD234_250624, 0960_QC103_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD291_250624, 0960_SD293_250624	24-Jun-2025	11-Jul-2025	21-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD124_250625, 0960_SD157_250625, 0960_SD168_250625, 0960_SD174_250625, 0960_SD189_250625, 0960_QC104_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD265_250625, 0960_SD278_250625	25-Jun-2025	11-Jul-2025	22-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD190_250626, 0960_SD193_250626	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD288_250626	26-Jun-2025	11-Jul-2025	23-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD305_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD209_250627	27-Jun-2025	11-Jul-2025	24-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD009_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD298_250628	28-Jun-2025	11-Jul-2025	25-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_QC109_250628	28-Jun-2025	14-Jul-2025	25-Dec-2025	✔	14-Jul-2025	23-Aug-2025	✔
HDPE Soil Jar (EP231X)							



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
0960_SD205_250629, 0960_SD301_250629, 0960_SD304_250629	0960_SD300_250629, 0960_SD303_250629,	29-Jun-2025	11-Jul-2025	26-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD208_250630		30-Jun-2025	11-Jul-2025	27-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0960_SD277_250625	01-Jul-2025	11-Jul-2025	28-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD121_250623, 0960_SD123_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD219_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD114_250624, 0960_SD234_250624, 0960_QC103_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD291_250624, 0960_SD293_250624	24-Jun-2025	11-Jul-2025	21-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD124_250625, 0960_SD157_250625, 0960_SD168_250625, 0960_SD174_250625, 0960_SD189_250625, 0960_QC104_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD265_250625, 0960_SD278_250625	25-Jun-2025	11-Jul-2025	22-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD190_250626, 0960_SD193_250626	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD288_250626	26-Jun-2025	11-Jul-2025	23-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD305_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD209_250627	27-Jun-2025	11-Jul-2025	24-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD009_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD298_250628	28-Jun-2025	11-Jul-2025	25-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_QC109_250628	28-Jun-2025	14-Jul-2025	25-Dec-2025	✔	14-Jul-2025	23-Aug-2025	✔
HDPE Soil Jar (EP231X)							



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides - Continued								
0960_SD205_250629, 0960_SD301_250629, 0960_SD304_250629	0960_SD300_250629, 0960_SD303_250629,	29-Jun-2025	11-Jul-2025	26-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD208_250630		30-Jun-2025	11-Jul-2025	27-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0960_SD277_250625	01-Jul-2025	11-Jul-2025	28-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD121_250623, 0960_SD123_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD219_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD114_250624, 0960_SD234_250624, 0960_QC103_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD291_250624, 0960_SD293_250624	24-Jun-2025	11-Jul-2025	21-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD124_250625, 0960_SD157_250625, 0960_SD168_250625, 0960_SD174_250625, 0960_SD189_250625, 0960_QC104_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD265_250625, 0960_SD278_250625	25-Jun-2025	11-Jul-2025	22-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD190_250626, 0960_SD193_250626	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD288_250626	26-Jun-2025	11-Jul-2025	23-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD305_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD209_250627	27-Jun-2025	11-Jul-2025	24-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD009_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD298_250628	28-Jun-2025	11-Jul-2025	25-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_QC109_250628	28-Jun-2025	14-Jul-2025	25-Dec-2025	✔	14-Jul-2025	23-Aug-2025	✔
HDPE Soil Jar (EP231X)							



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
0960_SD205_250629, 0960_SD301_250629, 0960_SD304_250629	0960_SD300_250629, 0960_SD303_250629,	29-Jun-2025	11-Jul-2025	26-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD208_250630		30-Jun-2025	11-Jul-2025	27-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0960_SD277_250625	01-Jul-2025	11-Jul-2025	28-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD121_250623, 0960_SD123_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD219_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD114_250624, 0960_SD234_250624, 0960_QC103_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD291_250624, 0960_SD293_250624	24-Jun-2025	11-Jul-2025	21-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD108_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD124_250625, 0960_SD157_250625, 0960_SD168_250625, 0960_SD174_250625, 0960_SD189_250625, 0960_QC104_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD265_250625, 0960_SD278_250625	25-Jun-2025	11-Jul-2025	22-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD190_250626, 0960_SD193_250626	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD288_250626	26-Jun-2025	11-Jul-2025	23-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD305_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD209_250627	27-Jun-2025	11-Jul-2025	24-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD199_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD009_250628	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	11-Jul-2025	19-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD298_250628	28-Jun-2025	11-Jul-2025	25-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_QC109_250628	28-Jun-2025	14-Jul-2025	25-Dec-2025	✔	14-Jul-2025	23-Aug-2025	✔
HDPE Soil Jar (EP231X)							



Matrix: SOIL

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums - Continued								
0960_SD205_250629, 0960_SD301_250629, 0960_SD304_250629	0960_SD300_250629, 0960_SD303_250629,	29-Jun-2025	11-Jul-2025	26-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔
HDPE Soil Jar (EP231X) 0960_SD208_250630		30-Jun-2025	11-Jul-2025	27-Dec-2025	✔	11-Jul-2025	20-Aug-2025	✔

Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_MW021_250623,	0960_MW113_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW114_250623, 0960_MW211_250623, 0960_MW164_250623, 0960_MW165_250623, 0960_MW167_250623, 0960_MW148D_250623, 0960_QC101_250623,	0960_MW233_250623, 0960_MW162_250623, 0960_MW018_250623, 0960_MW166_250623, 0960_MW112_250623, 0960_MW148S_250623, 0960_QC401_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	15-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW137A_250624, 0960_MW137C_250624,	0960_MW137B_250624, 0960_MW137D_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC402_250624,	0960_QC302_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW105_250624, 0960_MW139_250624, 0960_MW104_250624,	0960_MW122_250624, 0960_MW103_250624, 0960_QC102_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	15-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW127_250625, 0960_MW229_250624, 0960_MW227_250624,	0960_MW134_250625, 0960_MW230_250624, 0960_QC105_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW168_250623, 0960_MW170_250625, 0960_MW102_250625, 0960_SW302_250625,	0960_MW115_250625, 0960_MW126_250625, 0960_MW124_250625, 0960_MW239A_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	15-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW193_250626, 0960_MW174_250626	0960_QC106_250626,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW172_250626, 0960_MW144A_250626, 0960_QC303_250625	0960_MW135A_250626, 0960_QC403_250625,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW192_250626		26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	16-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW132_250626		26-Jun-2025	14-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW178A_250627, 0960_MW178C_250627,	0960_MW178B_250627, 0960_MW178D_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	10-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0960_MW228_250627, 0960_QC404_250626, 0960_QC305_250627	0960_QC304_250626, 0960_QC405_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW146A_250627, 0960_MW143A_250627,	0960_MW147A_250627, 0960_QC108_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	15-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW209_250627, 0960_SW305_250627	0960_SW211_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	16-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179A_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_250628, 0960_MW179D_250628	0960_MW179C_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	14-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW180A_250628, 0960_MW140A_250628, 0960_SW207_250628, 0960_QC306_250628	0960_MW181A_250628, 0960_MW145A_250628, 0960_QC406_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	15-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW301_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	16-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW177A_250629, 0960_MW177C_250629, 0960_MW176B_250629, 0960_MW177D_250629	0960_MW177B_250629, 0960_MW176A_250629, 0960_MW176C_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	10-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW205_0629		29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	11-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141C_250629, 0960_OTH106_250629, 0960_QC110_250629	0960_MW141D_250629, 0960_OTH107_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW001_250629, 0960_SW304_250629, 0960_QC307_250629,	0960_SW300_250629, 0960_QC407_250629, 0960_QC111_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	15-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141A_250629,	0960_MW141B_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	16-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_250629		29-Jun-2025	14-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW222_250630,	0960_QC112_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	11-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0960_OTH132_250630, 0960_QC115_250630	0960_OTH103_250630,	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	14-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW151_250630, 0960_MW175A_250630, 0960_QC408_250630,	0960_MW159_250630, 0960_QC116_250630, 0960_QC308_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	15-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_250630, 0960_SW208_250630,	0960_OTH129_250630, 0960_QC114_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	16-Jul-2025	27-Dec-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0960_MW021_250623,	0960_MW113_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW114_250623, 0960_MW211_250623, 0960_MW164_250623, 0960_MW165_250623, 0960_MW167_250623, 0960_MW148D_250623, 0960_QC101_250623,	0960_MW233_250623, 0960_MW162_250623, 0960_MW018_250623, 0960_MW166_250623, 0960_MW112_250623, 0960_MW148S_250623, 0960_QC401_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	15-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW137A_250624, 0960_MW137C_250624,	0960_MW137B_250624, 0960_MW137D_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC402_250624,	0960_QC302_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW105_250624, 0960_MW139_250624, 0960_MW104_250624,	0960_MW122_250624, 0960_MW103_250624, 0960_QC102_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	15-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW127_250625, 0960_MW229_250624, 0960_MW227_250624,	0960_MW134_250625, 0960_MW230_250624, 0960_QC105_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW168_250623, 0960_MW170_250625, 0960_MW102_250625, 0960_SW302_250625,	0960_MW115_250625, 0960_MW126_250625, 0960_MW124_250625, 0960_MW239A_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	15-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW193_250626, 0960_MW174_250626	0960_QC106_250626,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW172_250626, 0960_MW144A_250626, 0960_QC303_250625	0960_MW135A_250626, 0960_QC403_250625,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW192_250626		26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	16-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW132_250626		26-Jun-2025	14-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW178A_250627, 0960_MW178C_250627,	0960_MW178B_250627, 0960_MW178D_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	10-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
0960_MW228_250627, 0960_QC404_250626, 0960_QC305_250627	0960_QC304_250626, 0960_QC405_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW146A_250627, 0960_MW143A_250627,	0960_MW147A_250627, 0960_QC108_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	15-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW209_250627, 0960_SW305_250627	0960_SW211_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	16-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179A_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_250628, 0960_MW179D_250628	0960_MW179C_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	14-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW180A_250628, 0960_MW140A_250628, 0960_SW207_250628, 0960_QC306_250628	0960_MW181A_250628, 0960_MW145A_250628, 0960_QC406_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	15-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW301_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	16-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW177A_250629, 0960_MW177C_250629, 0960_MW176B_250629, 0960_MW177D_250629	0960_MW177B_250629, 0960_MW176A_250629, 0960_MW176C_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	10-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW205_0629		29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	11-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141C_250629, 0960_OTH106_250629, 0960_QC110_250629	0960_MW141D_250629, 0960_OTH107_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW001_250629, 0960_SW304_250629, 0960_QC307_250629,	0960_SW300_250629, 0960_QC407_250629, 0960_QC111_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	15-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141A_250629,	0960_MW141B_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	16-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_250629		29-Jun-2025	14-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW222_250630,	0960_QC112_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	11-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
0960_OTH132_250630, 0960_QC115_250630	0960_OTH103_250630,	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	14-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW151_250630, 0960_MW175A_250630, 0960_QC408_250630,	0960_MW159_250630, 0960_QC116_250630, 0960_QC308_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	15-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_250630, 0960_SW208_250630,	0960_OTH129_250630, 0960_QC114_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	16-Jul-2025	27-Dec-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0960_MW021_250623,	0960_MW113_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW114_250623, 0960_MW211_250623, 0960_MW164_250623, 0960_MW165_250623, 0960_MW167_250623, 0960_MW148D_250623, 0960_QC101_250623,	0960_MW233_250623, 0960_MW162_250623, 0960_MW018_250623, 0960_MW166_250623, 0960_MW112_250623, 0960_MW148S_250623, 0960_QC401_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	15-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW137A_250624, 0960_MW137C_250624,	0960_MW137B_250624, 0960_MW137D_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC402_250624,	0960_QC302_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW105_250624, 0960_MW139_250624, 0960_MW104_250624,	0960_MW122_250624, 0960_MW103_250624, 0960_QC102_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	15-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW127_250625, 0960_MW229_250624, 0960_MW227_250624,	0960_MW134_250625, 0960_MW230_250624, 0960_QC105_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW168_250623, 0960_MW170_250625, 0960_MW102_250625, 0960_SW302_250625,	0960_MW115_250625, 0960_MW126_250625, 0960_MW124_250625, 0960_MW239A_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	15-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW193_250626, 0960_MW174_250626	0960_QC106_250626,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW172_250626, 0960_MW144A_250626, 0960_QC303_250625	0960_MW135A_250626, 0960_QC403_250625,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW192_250626		26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	16-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW132_250626		26-Jun-2025	14-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW178A_250627, 0960_MW178C_250627,	0960_MW178B_250627, 0960_MW178D_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	10-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides - Continued								
0960_MW228_250627, 0960_QC404_250626, 0960_QC305_250627	0960_QC304_250626, 0960_QC405_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW146A_250627, 0960_MW143A_250627,	0960_MW147A_250627, 0960_QC108_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	15-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW209_250627, 0960_SW305_250627	0960_SW211_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	16-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179A_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_250628, 0960_MW179D_250628	0960_MW179C_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	14-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW180A_250628, 0960_MW140A_250628, 0960_SW207_250628, 0960_QC306_250628	0960_MW181A_250628, 0960_MW145A_250628, 0960_QC406_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	15-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW301_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	16-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW177A_250629, 0960_MW177C_250629, 0960_MW176B_250629, 0960_MW177D_250629	0960_MW177B_250629, 0960_MW176A_250629, 0960_MW176C_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	10-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW205_0629		29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	11-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141C_250629, 0960_OTH106_250629, 0960_QC110_250629	0960_MW141D_250629, 0960_OTH107_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW001_250629, 0960_SW304_250629, 0960_QC307_250629,	0960_SW300_250629, 0960_QC407_250629, 0960_QC111_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	15-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141A_250629,	0960_MW141B_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	16-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_250629		29-Jun-2025	14-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW222_250630,	0960_QC112_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	11-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides - Continued								
0960_OTH132_250630, 0960_QC115_250630	0960_OTH103_250630,	30-Jun-2025	10-Jul-2025	27-Dec-2025	✓	14-Jul-2025	27-Dec-2025	✓
HDPE (no PTFE) (EP231X-LL) 0960_MW151_250630, 0960_MW175A_250630, 0960_QC408_250630,	0960_MW159_250630, 0960_QC116_250630, 0960_QC308_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✓	15-Jul-2025	27-Dec-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_250630, 0960_SW208_250630,	0960_OTH129_250630, 0960_QC114_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✓	16-Jul-2025	27-Dec-2025	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0960_MW021_250623,	0960_MW113_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW114_250623, 0960_MW211_250623, 0960_MW164_250623, 0960_MW165_250623, 0960_MW167_250623, 0960_MW148D_250623, 0960_QC101_250623,	0960_MW233_250623, 0960_MW162_250623, 0960_MW018_250623, 0960_MW166_250623, 0960_MW112_250623, 0960_MW148S_250623, 0960_QC401_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	15-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW137A_250624, 0960_MW137C_250624,	0960_MW137B_250624, 0960_MW137D_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC402_250624,	0960_QC302_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW105_250624, 0960_MW139_250624, 0960_MW104_250624,	0960_MW122_250624, 0960_MW103_250624, 0960_QC102_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	15-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW127_250625, 0960_MW229_250624, 0960_MW227_250624,	0960_MW134_250625, 0960_MW230_250624, 0960_QC105_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW168_250623, 0960_MW170_250625, 0960_MW102_250625, 0960_SW302_250625,	0960_MW115_250625, 0960_MW126_250625, 0960_MW124_250625, 0960_MW239A_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	15-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW193_250626, 0960_MW174_250626	0960_QC106_250626,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW172_250626, 0960_MW144A_250626, 0960_QC303_250625	0960_MW135A_250626, 0960_QC403_250625,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW192_250626		26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	16-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW132_250626		26-Jun-2025	14-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW178A_250627, 0960_MW178C_250627,	0960_MW178B_250627, 0960_MW178D_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	10-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
0960_MW228_250627, 0960_QC404_250626, 0960_QC305_250627	0960_QC304_250626, 0960_QC405_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW146A_250627, 0960_MW143A_250627,	0960_MW147A_250627, 0960_QC108_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	15-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW209_250627, 0960_SW305_250627	0960_SW211_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	16-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179A_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_250628, 0960_MW179D_250628	0960_MW179C_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	14-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW180A_250628, 0960_MW140A_250628, 0960_SW207_250628, 0960_QC306_250628	0960_MW181A_250628, 0960_MW145A_250628, 0960_QC406_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	15-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW301_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	16-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW177A_250629, 0960_MW177C_250629, 0960_MW176B_250629, 0960_MW177D_250629	0960_MW177B_250629, 0960_MW176A_250629, 0960_MW176C_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	10-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW205_0629		29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	11-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141C_250629, 0960_OTH106_250629, 0960_QC110_250629	0960_MW141D_250629, 0960_OTH107_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW001_250629, 0960_SW304_250629, 0960_QC307_250629,	0960_SW300_250629, 0960_QC407_250629, 0960_QC111_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	15-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141A_250629,	0960_MW141B_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	16-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_250629		29-Jun-2025	14-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW222_250630,	0960_QC112_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	11-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
0960_OTH132_250630, 0960_QC115_250630	0960_OTH103_250630,	30-Jun-2025	10-Jul-2025	27-Dec-2025	✓	14-Jul-2025	27-Dec-2025	✓
HDPE (no PTFE) (EP231X-LL) 0960_MW151_250630, 0960_MW175A_250630, 0960_QC408_250630,	0960_MW159_250630, 0960_QC116_250630, 0960_QC308_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✓	15-Jul-2025	27-Dec-2025	✓
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_250630, 0960_SW208_250630,	0960_OTH129_250630, 0960_QC114_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✓	16-Jul-2025	27-Dec-2025	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0960_MW021_250623,	0960_MW113_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	11-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW114_250623, 0960_MW211_250623, 0960_MW164_250623, 0960_MW165_250623, 0960_MW167_250623, 0960_MW148D_250623, 0960_QC101_250623,	0960_MW233_250623, 0960_MW162_250623, 0960_MW018_250623, 0960_MW166_250623, 0960_MW112_250623, 0960_MW148S_250623, 0960_QC401_250623	23-Jun-2025	10-Jul-2025	20-Dec-2025	✔	15-Jul-2025	20-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW137A_250624, 0960_MW137C_250624,	0960_MW137B_250624, 0960_MW137D_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	10-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_QC402_250624,	0960_QC302_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	11-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW105_250624, 0960_MW139_250624, 0960_MW104_250624,	0960_MW122_250624, 0960_MW103_250624, 0960_QC102_250624	24-Jun-2025	10-Jul-2025	21-Dec-2025	✔	15-Jul-2025	21-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW127_250625, 0960_MW229_250624, 0960_MW227_250624,	0960_MW134_250625, 0960_MW230_250624, 0960_QC105_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	11-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW168_250623, 0960_MW170_250625, 0960_MW102_250625, 0960_SW302_250625,	0960_MW115_250625, 0960_MW126_250625, 0960_MW124_250625, 0960_MW239A_250625	25-Jun-2025	10-Jul-2025	22-Dec-2025	✔	15-Jul-2025	22-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_SW193_250626, 0960_MW174_250626	0960_QC106_250626,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	11-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW172_250626, 0960_MW144A_250626, 0960_QC303_250625	0960_MW135A_250626, 0960_QC403_250625,	26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW192_250626		26-Jun-2025	10-Jul-2025	23-Dec-2025	✔	16-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW132_250626		26-Jun-2025	14-Jul-2025	23-Dec-2025	✔	15-Jul-2025	23-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW178A_250627, 0960_MW178C_250627,	0960_MW178B_250627, 0960_MW178D_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	10-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums - Continued								
0960_MW228_250627, 0960_QC404_250626, 0960_QC305_250627	0960_QC304_250626, 0960_QC405_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	11-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW146A_250627, 0960_MW143A_250627,	0960_MW147A_250627, 0960_QC108_250627	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	15-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW209_250627, 0960_SW305_250627	0960_SW211_250627,	27-Jun-2025	10-Jul-2025	24-Dec-2025	✔	16-Jul-2025	24-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179A_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	10-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW179B_250628, 0960_MW179D_250628	0960_MW179C_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	14-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW180A_250628, 0960_MW140A_250628, 0960_SW207_250628, 0960_QC306_250628	0960_MW181A_250628, 0960_MW145A_250628, 0960_QC406_250628,	28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	15-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_SW301_250628		28-Jun-2025	10-Jul-2025	25-Dec-2025	✔	16-Jul-2025	25-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW177A_250629, 0960_MW177C_250629, 0960_MW176B_250629, 0960_MW177D_250629	0960_MW177B_250629, 0960_MW176A_250629, 0960_MW176C_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	10-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW205_0629		29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	11-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141C_250629, 0960_OTH106_250629, 0960_QC110_250629	0960_MW141D_250629, 0960_OTH107_250629,	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW001_250629, 0960_SW304_250629, 0960_QC307_250629,	0960_SW300_250629, 0960_QC407_250629, 0960_QC111_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	15-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_MW141A_250629,	0960_MW141B_250629	29-Jun-2025	10-Jul-2025	26-Dec-2025	✔	16-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_SW303_250629		29-Jun-2025	14-Jul-2025	26-Dec-2025	✔	14-Jul-2025	26-Dec-2025	✔
HDPE (no PTFE) (EP231X) 0960_MW222_250630,	0960_QC112_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	11-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums - Continued								
0960_OTH132_250630, 0960_QC115_250630	0960_OTH103_250630,	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	14-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-LL) 0960_MW151_250630, 0960_MW175A_250630, 0960_QC408_250630,	0960_MW159_250630, 0960_QC116_250630, 0960_QC308_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	15-Jul-2025	27-Dec-2025	✔
HDPE (no PTFE) (EP231X-SUT) 0960_OTH134_250630, 0960_SW208_250630,	0960_OTH129_250630, 0960_QC114_250630	30-Jun-2025	10-Jul-2025	27-Dec-2025	✔	16-Jul-2025	27-Dec-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	7	52	13.46	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	9	86	10.47	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	5	86	5.81	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	5	86	5.81	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	5	86	5.81	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	2	26	7.69	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	85	7.06	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	62	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	4	26	15.38	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	85	7.06	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	4	62	6.45	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	4	26	15.38	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	6	85	7.06	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	4	62	6.45	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	1	26	3.85	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	85	3.53	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	62	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 negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	* ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.



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 : EP2510792

Amendment : 1

Client : GHD PTY LTD

Contact : [REDACTED]

Address : 999 HAY STREET
PERTH WA, AUSTRALIA 6000

Laboratory : Environmental Division Perth

Contact : [REDACTED]

Address : 26 Rigali Way Wangara WA Australia
6065

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

E-mail : [REDACTED]

Telephone : +61-8-9406 1301

Facsimile : +61-8-9406 1399

Project : WA_0960_PFASOMP_25

Order number : 12641234/02.2.8

Page : 1 of 8

Quote number : EP2024GHDSE0016_V5
(EP24GHDSE0016_V5)

C-O-C number : 79896

Site : 0960

QC Level : NEPM 2013 B3 & ALS QC Standard

Sampler : [REDACTED]

Dates

Date Samples Received : 07-Jul-2025 14:00

Issue Date : 21-Jul-2025

Client Requested Due Date : 22-Jul-2025

Scheduled Reporting Date : **22-Jul-2025**

Delivery Details

Mode of Delivery : Carrier

Security Seal : Intact.

No. of coolers/boxes : 13

Temperature : 15.8 - Ice present

Receipt Detail :

No. of samples received / analysed : 171 / 170

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 see scanned COC for sample discrepancies: extra samples , samples not received etc.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (Samples.Perth@alsglobal.com)
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Perth, NATA accreditation no. 825, site no. 15847.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **pH analysis should be conducted within 6 hours of sampling.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X-EP (solids) PFAS - Full Suite (30 analyses)
EP2510792-084	28-Jun-2025 11:32	0960_SD199_250628	✓	✓
EP2510792-085	28-Jun-2025 11:55	0960_SD200_250628	✓	✓
EP2510792-086	24-Jun-2025 11:28	0960_SD219_250624	✓	✓
EP2510792-087	25-Jun-2025 14:15	0960_SD108_250625	✓	✓
EP2510792-088	25-Jun-2025 10:19	0960_SD113_250625	✓	✓
EP2510792-089	24-Jun-2025 08:15	0960_SD114_250624	✓	✓
EP2510792-090	23-Jun-2025 13:11	0960_SD121_250623	✓	✓
EP2510792-091	23-Jun-2025 13:12	0960_SD122_250623	✓	✓
EP2510792-092	23-Jun-2025 13:22	0960_SD123_250623	✓	✓
EP2510792-093	25-Jun-2025 09:38	0960_SD124_250625	✓	✓
EP2510792-094	25-Jun-2025 09:23	0960_SD125_250625	✓	✓
EP2510792-095	25-Jun-2025 14:41	0960_SD157_250625	✓	✓
EP2510792-096	25-Jun-2025 10:37	0960_SD166_250625	✓	✓
EP2510792-097	25-Jun-2025 10:55	0960_SD168_250625	✓	✓
EP2510792-098	25-Jun-2025 14:57	0960_SD170_250625	✓	✓
EP2510792-099	25-Jun-2025 09:54	0960_SD174_250625	✓	✓
EP2510792-100	25-Jun-2025 12:10	0960_SD176_250625	✓	✓
EP2510792-101	25-Jun-2025 08:01	0960_SD189_250625	✓	✓
EP2510792-102	26-Jun-2025 15:59	0960_SD190_250626	✓	✓
EP2510792-103	26-Jun-2025 15:26	0960_SD192_250626	✓	✓
EP2510792-104	26-Jun-2025 15:27	0960_SD193_250626	✓	✓
EP2510792-105	24-Jun-2025 08:51	0960_SD231_350624	✓	✓
EP2510792-106	24-Jun-2025 08:29	0960_SD234_250624	✓	✓
EP2510792-107	24-Jun-2025 11:10	0960_SD235_250624	✓	✓
EP2510792-108	25-Jun-2025 10:02	0960_SD243_250625	✓	✓
EP2510792-109	25-Jun-2025 14:29	0960_SD265_250625	✓	✓
EP2510792-110	01-Jul-2025 07:30	0960_SD277_250625	✓	✓
EP2510792-111	28-Jun-2025 12:45	0960_SD298_250628	✓	✓
EP2510792-112	25-Jun-2025 11:05	0960_SD279_250625	✓	✓
EP2510792-113	26-Jun-2025 14:38	0960_SD288_250626	✓	✓
EP2510792-114	24-Jun-2025 14:27	0960_SD291_250624	✓	✓
EP2510792-115	24-Jun-2025 14:44	0960_SD292_250624	✓	✓
EP2510792-116	24-Jun-2025 15:01	0960_SD293_250624	✓	✓
EP2510792-117	25-Jun-2025 09:14	0960_SD278_250625	✓	✓
EP2510792-118	29-Jun-2025 11:24	0960_SD205_250629	✓	✓



			SOIL - EA055-103 Moisture Content	SOIL - EP231X-EP (solids) PFAS - Full Suite (30 analytes)
EP2510792-119	28-Jun-2025 10:43	0960_SD207_250628	✓	✓
EP2510792-120	30-Jun-2025 11:45	0960_SD208_250630	✓	✓
EP2510792-121	27-Jun-2025 14:13	0960_SD209_250627	✓	✓
EP2510792-122	24-Jun-2025 15:43	0960_SD210_250624	✓	✓
EP2510792-123	27-Jun-2025 14:13	0960_SD211_250627	✓	✓
EP2510792-124	29-Jun-2025 15:10	0960_SD300_250629	✓	✓
EP2510792-125	29-Jun-2025 15:33	0960_SD301_250629	✓	✓
EP2510792-126	25-Jun-2025 16:39	0960_SD302_250625	✓	✓
EP2510792-127	29-Jun-2025 17:18	0960_SD303_250629	✓	✓
EP2510792-128	29-Jun-2025 17:35	0960_SD304_250629	✓	✓
EP2510792-129	27-Jun-2025 14:59	0960_SD305_250627	✓	✓
EP2510792-130	28-Jun-2025 13:16	0960_SD009_250628	✓	✓
EP2510792-134	24-Jun-2025 14:45	0960_QC103_250624	✓	✓
EP2510792-136	24-Jun-2025 15:11	0960_SD198_250624	✓	✓
EP2510792-139	25-Jun-2025 10:54	0960_QC104_250625	✓	✓
EP2510792-150	26-Jun-2025 15:36	0960_QC107_250626	✓	✓
EP2510792-176	28-Jun-2025 00:00	0960_QC301_250623	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) WATER No analysis requested	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30)
EP2510792-001	23-Jun-2025 09:39	0960_MW021_250623		✓		
EP2510792-002	23-Jun-2025 12:24	0960_MW113_250623		✓		
EP2510792-003	23-Jun-2025 10:59	0960_MW114_250623		✓		
EP2510792-004	23-Jun-2025 11:15	0960_MW233_250623		✓		
EP2510792-005	23-Jun-2025 11:01	0960_MW211_250623		✓		
EP2510792-006	23-Jun-2025 11:33	0960_MW162_250623		✓		
EP2510792-007	23-Jun-2025 13:32	0960_MW164_250623		✓		
EP2510792-008	23-Jun-2025 14:33	0960_MW018_250623		✓		
EP2510792-009	23-Jun-2025 14:07	0960_MW165_250623		✓		
EP2510792-010	23-Jun-2025 14:59	0960_MW166_250623		✓		
EP2510792-011	23-Jun-2025 15:32	0960_MW167_250623		✓		
EP2510792-012	25-Jun-2025 11:41	0960_MW168_250623		✓		



			(On Hold) WATER No analysis requested	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30
EP2510792-013	23-Jun-2025 16:02	0960_MW112_250623		✓		
EP2510792-014	25-Jun-2025 09:00	0960_MW115_250625		✓		
EP2510792-015	24-Jun-2025 07:56	0960_MW105_250624		✓		
EP2510792-016	23-Jun-2025 16:42	0960_MW148D_250623		✓		
EP2510792-017	23-Jun-2025 16:43	0960_MW148S_250623		✓		
EP2510792-018	30-Jun-2025 08:34	0960_MW151_250630		✓		
EP2510792-019	30-Jun-2025 09:43	0960_MW159_250630		✓		
EP2510792-020	24-Jun-2025 09:31	0960_MW122_250624		✓		
EP2510792-021	27-Jun-2025 09:35	0960_MW146A_250627		✓		
EP2510792-022	27-Jun-2025 17:09	0960_MW147A_250627		✓		
EP2510792-023	28-Jun-2025 10:40	0960_MW180A_250628		✓		
EP2510792-024	28-Jun-2025 16:01	0960_MW181A_250628		✓		
EP2510792-025	26-Jun-2025 07:56	0960_MW172_250626		✓		
EP2510792-026	25-Jun-2025 11:23	0960_MW170_250625		✓		
EP2510792-027	25-Jun-2025 12:28	0960_MW127_250625		✓		
EP2510792-028	25-Jun-2025 12:49	0960_MW126_250625		✓		
EP2510792-029	24-Jun-2025 13:39	0960_MW139_250624		✓		
EP2510792-030	28-Jun-2025 13:50	0960_MW140A_250628		✓		
EP2510792-031	25-Jun-2025 13:38	0960_MW102_250625		✓		
EP2510792-032	28-Jun-2025 11:08	0960_MW145A_250628		✓		
EP2510792-033	24-Jun-2025 10:56	0960_MW103_250624		✓		
EP2510792-034	24-Jun-2025 08:53	0960_MW104_250624		✓		
EP2510792-035	25-Jun-2025 07:44	0960_MW134_250625		✓		
EP2510792-036	26-Jun-2025 14:16	0960_MW135A_250626		✓		
EP2510792-037	30-Jun-2025 13:21	0960_MW175A_250630		✓		
EP2510792-038	25-Jun-2025 13:59	0960_MW124_250625		✓		
EP2510792-039	26-Jun-2025 13:20	0960_MW144A_250626		✓		
EP2510792-040	27-Jun-2025 15:57	0960_MW143A_250627		✓		
EP2510792-041	24-Jun-2025 15:55	0960_MW137A_250624				✓
EP2510792-042	24-Jun-2025 16:04	0960_MW137B_250624				✓
EP2510792-043	24-Jun-2025 16:06	0960_MW137C_250624				✓
EP2510792-044	24-Jun-2025 16:07	0960_MW137D_250624				✓
EP2510792-045	29-Jun-2025 16:50	0960_MW177A_250629				✓
EP2510792-046	29-Jun-2025 16:45	0960_MW177B_250629				✓
EP2510792-047	29-Jun-2025 16:29	0960_MW177C_250629				✓
EP2510792-048	29-Jun-2025 15:02	0960_MW176A_250629				✓
EP2510792-049	29-Jun-2025 15:03	0960_MW176B_250629				✓
EP2510792-050	29-Jun-2025 15:04	0960_MW176C_250629				✓
EP2510792-051	29-Jun-2025 16:19	0960_MW177D_250629				✓
EP2510792-052	27-Jun-2025 12:29	0960_MW178A_250627				✓
EP2510792-053	27-Jun-2025 11:53	0960_MW178B_250627				✓



			(On Hold) WATER No analysis requested	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30)
EP2510792-054	27-Jun-2025 11:27	0960_MW178C_250627				✓
EP2510792-055	27-Jun-2025 12:28	0960_MW178D_250627				✓
EP2510792-056	28-Jun-2025 09:03	0960_MW179A_250628				✓
EP2510792-057	28-Jun-2025 09:01	0960_MW179B_250628				✓
EP2510792-058	28-Jun-2025 08:55	0960_MW179C_250628				✓
EP2510792-059	28-Jun-2025 08:25	0960_MW179D_250628				✓
EP2510792-060	29-Jun-2025 10:42	0960_MW141A_250629				✓
EP2510792-061	29-Jun-2025 10:41	0960_MW141B_250629				✓
EP2510792-062	29-Jun-2025 10:03	0960_MW141C_250629				✓
EP2510792-063	29-Jun-2025 09:58	0960_MW141D_250629				✓
EP2510792-064	30-Jun-2025 14:00	0960_OTH132_250630				✓
EP2510792-065	30-Jun-2025 13:37	0960_OTH134_250630				✓
EP2510792-066	30-Jun-2025 12:18	0960_OTH129_250630				✓
EP2510792-067	30-Jun-2025 11:41	0960_OTH103_250630				✓
EP2510792-068	29-Jun-2025 12:23	0960_OTH106_250629				✓
EP2510792-069	29-Jun-2025 12:46	0960_OTH107_250629				✓
EP2510792-070	26-Jun-2025 15:25	0960_SW192_250626				✓
EP2510792-071	26-Jun-2025 15:15	0960_SW193_250626		✓		
EP2510792-072	29-Jun-2025 15:34	0960_SW001_250629		✓		
EP2510792-073	29-Jun-2025 11:25	0960_SW205_0629		✓		
EP2510792-074	28-Jun-2025 10:41	0960_SW207_250628		✓		
EP2510792-075	30-Jun-2025 11:44	0960_SW208_250630				✓
EP2510792-076	27-Jun-2025 14:14	0960_SW209_250627				✓
EP2510792-077	27-Jun-2025 13:47	0960_SW211_250627				✓
EP2510792-078	29-Jun-2025 15:10	0960_SW300_250629		✓		
EP2510792-079	28-Jun-2025 13:15	0960_SW301_250628				✓
EP2510792-080	25-Jun-2025 16:38	0960_SW302_250625		✓		
EP2510792-082	29-Jun-2025 17:34	0960_SW304_250629		✓		
EP2510792-083	27-Jun-2025 15:00	0960_SW305_250627				✓
EP2510792-131	23-Jun-2025 14:35	0960_QC101_250623		✓		
EP2510792-132	23-Jun-2025 16:28	0960_QC401_250623		✓		
EP2510792-135	24-Jun-2025 08:58	0960_QC102_250624		✓		
EP2510792-137	24-Jun-2025 16:45	0960_QC402_250624			✓	
EP2510792-138	24-Jun-2025 16:47	0960_QC302_250624			✓	
EP2510792-140	25-Jun-2025 11:32	0960_MW229_250624			✓	
EP2510792-141	25-Jun-2025 11:36	0960_MW230_250624			✓	
EP2510792-142	25-Jun-2025 11:39	0960_MW227_250624			✓	
EP2510792-143	25-Jun-2025 12:50	0960_QC105_250625		✓		
EP2510792-144	25-Jun-2025 16:07	0960_MW239A_250625		✓		
EP2510792-145	26-Jun-2025 09:54	0960_QC403_250625		✓		
EP2510792-146	26-Jun-2025 09:56	0960_QC303_250625		✓		



			(On Hold) WATER No analysis requested	WATER - EP231X (EP) PFAS - Full Suite (30 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30
EP2510792-148	26-Jun-2025 11:53	0960_QC106_250626			✓	
EP2510792-149	26-Jun-2025 11:53	0960_MW174_250626			✓	
EP2510792-151	27-Jun-2025 09:02	0960_MW228_250627			✓	
EP2510792-152	27-Jun-2025 09:31	0960_QC304_250626			✓	
EP2510792-153	27-Jun-2025 09:34	0960_QC404_250626			✓	
EP2510792-154	27-Jun-2025 09:39	0960_QC405_250627			✓	
EP2510792-155	27-Jun-2025 11:25	0960_QC305_250627			✓	
EP2510792-156	27-Jun-2025 17:06	0960_QC108_250627		✓		
EP2510792-157	28-Jun-2025 08:47	0960_QC406_250628		✓		
EP2510792-158	28-Jun-2025 11:00	0960_QC306_250628		✓		
EP2510792-159	29-Jun-2025 10:22	0960_QC110_250629				✓
EP2510792-160	29-Jun-2025 10:33	0960_QC407_250629		✓		
EP2510792-161	29-Jun-2025 10:43	0960_QC307_250629		✓		
EP2510792-162	29-Jun-2025 11:28	0960_QC111_250629		✓		
EP2510792-163	30-Jun-2025 07:57	0960_MW222_250630			✓	
EP2510792-164	30-Jun-2025 09:44	0960_QC112_250630		✓		
EP2510792-165	30-Jun-2025 11:42	0960_QC115_250630				✓
EP2510792-166	30-Jun-2025 11:43	0960_QC114_250630				✓
EP2510792-167	30-Jun-2025 11:46	0960_QC113_250630	✓			
EP2510792-168	30-Jun-2025 13:39	0960_QC116_250630		✓		
EP2510792-169	30-Jun-2025 14:23	0960_QC408_250630			✓	
EP2510792-170	30-Jun-2025 14:25	0960_QC308_250630			✓	
EP2510792-174	29-Jun-2025 00:00	0960_SW303_250629		✓		
EP2510792-175	26-Jun-2025 00:00	0960_MW132_250626			✓	
EP2510792-177	23-Jun-2025 14:29	0960_QC301_250623		✓		

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							
0960_QC103_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_QC104_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_QC107_250626	HDPE Soil Jar	----	10-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_QC301_250623	HDPE Soil Jar	----	12-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD009_250628	HDPE Soil Jar	----	12-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD108_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD113_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD114_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD121_250623	HDPE Soil Jar	----	07-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD122_250623	HDPE Soil Jar	----	07-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗

Issue Date : 21-Jul-2025
Page : 7 of 8
Work Order : EP2510792 Amendment 1
Client : GHD PTY LTD



0960_SD123_250623	HDPE Soil Jar	----	07-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD124_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD125_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD157_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD166_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD168_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD170_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD174_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD176_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD189_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD190_250626	HDPE Soil Jar	----	10-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD192_250626	HDPE Soil Jar	----	10-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD193_250626	HDPE Soil Jar	----	10-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD198_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD199_250628	HDPE Soil Jar	----	12-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD200_250628	HDPE Soil Jar	----	12-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD205_250629	HDPE Soil Jar	----	13-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD207_250628	HDPE Soil Jar	----	12-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD208_250630	HDPE Soil Jar	----	14-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD209_250627	HDPE Soil Jar	----	11-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD210_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD211_250627	HDPE Soil Jar	----	11-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD219_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD231_350624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD234_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD235_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD243_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD265_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD277_250625	HDPE Soil Jar	----	15-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD278_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD279_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD288_250626	HDPE Soil Jar	----	10-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD291_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD292_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD293_250624	HDPE Soil Jar	----	08-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD298_250628	HDPE Soil Jar	----	12-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD300_250629	HDPE Soil Jar	----	13-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD301_250629	HDPE Soil Jar	----	13-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD302_250625	HDPE Soil Jar	----	09-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD303_250629	HDPE Soil Jar	----	13-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD304_250629	HDPE Soil Jar	----	13-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗
0960_SD305_250627	HDPE Soil Jar	----	11-Jul-2025	07-Jul-2025	✓	21-Jul-2025	✗



Requested Deliverables

Accounts Payable Australia

- A4 - AU Tax Invoice (INV)

Email accountspayableAU@ghd.com

DERP LAB REPORTS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email derp.labreports@esdat.com.au
Email derp.labreports@esdat.com.au
Email derp.labreports@esdat.com.au
Email derp.labreports@esdat.com.au
Email derp.labreports@esdat.com.au
Email derp.labreports@esdat.com.au
Email derp.labreports@esdat.com.au

LAB REPORTS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email GHD.LabReports@ghd.com
Email GHD.LabReports@ghd.com
Email GHD.LabReports@ghd.com
Email GHD.LabReports@ghd.com
Email GHD.LabReports@ghd.com
Email GHD.LabReports@ghd.com
Email GHD.LabReports@ghd.com

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]

THOMAS PHILLIPS

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - ESDAT (ESDAT)
- Electronic SRN for ESdat (ESRN_ESDAT)

Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]
Email [REDACTED]

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED]		ghd.labreports@ghd.com, derp.labreports@esdat.com							
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0960_MW021_250623		23/06/2025 09:39 AM	WATER	ALS: 2 Non ALS: 0	No		X								
002	0960_MW113_250623		23/06/2025 12:24 PM	WATER	ALS: 4 Non ALS: 0	No		X								
003	0960_MW114_250623		23/06/2025 10:59 AM	WATER	ALS: 2 Non ALS: 0	No		X								
004	0960_MW233_250623		23/06/2025 11:15 AM	WATER	ALS: 2 Non ALS: 0	No		X								
005	0960_MW211_250623		23/06/2025 11:01 AM	WATER	ALS: 2 Non ALS: 0	No		X								
006	0960_MW162_250623		23/06/2025 11:33 AM	WATER	ALS: 2 Non ALS: 0	No		X								
007	0960_MW164_250623		23/06/2025 01:32 PM	WATER	ALS: 2 Non ALS: 0	No		X								

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED]				, ghd.labreports@ghd.com, derp.labreports@esdat.com					
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0960_MW018_250623		23/06/2025 02:33 PM	WATER	ALS: 2 Non ALS: 0	No		X								
009	0960_MW165_250623		23/06/2025 02:07 PM	WATER	ALS: 2 Non ALS: 0	No		X								
010	0960_MW166_250623		23/06/2025 02:59 PM	WATER	ALS: 2 Non ALS: 0	No		X								
011	0960_MW167_250623		23/06/2025 03:32 PM	WATER	ALS: 2 Non ALS: 0	No		X								
012	0960_MW168_250623		25/06/2025 11:41 AM	WATER	ALS: 2 Non ALS: 0	No		X								
013	0960_MW112_250623		23/06/2025 04:02 PM	WATER	ALS: 4 Non ALS: 0	No		X								
014	0960_MW115_250625		25/06/2025 09:00 AM	WATER	ALS: 2 Non ALS: 0	No		X								

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED]				, ghd.labreports@ghd.com, derp.labreports@esdat.com					
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	0960_MW105_250624		24/06/2025 07:56 AM	WATER	ALS: 2 Non ALS: 0	No		X								
016	0960_MW148D_250623		23/06/2025 04:42 PM	WATER	ALS: 2 Non ALS: 0	No		X								
017	0960_MW148S_250623		23/06/2025 04:43 PM	WATER	ALS: 2 Non ALS: 0	No		X								
018	0960_MW151_250630		30/06/2025 08:34 AM	WATER	ALS: 2 Non ALS: 0	No		X								
019	0960_MW159_250630		30/06/2025 09:43 AM	WATER	ALS: 2 Non ALS: 0	No		X								
020	0960_MW122_250624		24/06/2025 09:31 AM	WATER	ALS: 2 Non ALS: 0	No		X								
021	0960_MW146A_250627		27/06/2025 09:35 AM	WATER	ALS: 2 Non ALS: 0	No		X								

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED]		ghd.labreports@ghd.com, derp.labreports@esdat.com							
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
022	0960_MW147A_250627		27/06/2025 05:09 PM	WATER	ALS: 2 Non ALS: 0	No		X								
023	0960_MW180A_250628		28/06/2025 10:40 AM	WATER	ALS: 2 Non ALS: 0	No		X								
024	0960_MW181A_250628		28/06/2025 04:01 PM	WATER	ALS: 2 Non ALS: 0	No		X								
025	0960_MW172_250626		26/06/2025 07:56 AM	WATER	ALS: 2 Non ALS: 0	No		X								
026	0960_MW170_250625		25/06/2025 11:23 AM	WATER	ALS: 2 Non ALS: 0	No		X								
027	0960_MW127_250625		25/06/2025 12:28 PM	WATER	ALS: 2 Non ALS: 0	No		X								
028	0960_MW126_250625		25/06/2025 12:49 PM	WATER	ALS: 2 Non ALS: 0	No		X								



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

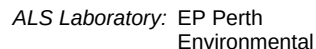
EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

[illegible]



DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

Other comments:

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:			
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:							
PROJECT: WA_0960_PFASOMP_25											
SITE: 0960											
ORDER NO: 12641234/02.2.8											
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]							
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016							
EMAIL REPORTS TO: [REDACTED]		, ghd.labreports@ghd.com, derp.labreports@esdat.com									
EMAIL INVOICES TO: accountspayableau@ghd.com											

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
043	0960_MW137C_250624		24/06/2025 04:06 PM	WATER	ALS: 2 Non ALS: 0	No				X						
044	0960_MW137D_250624		24/06/2025 04:07 PM	WATER	ALS: 2 Non ALS: 0	No				X						
045	0960_MW177A_250629		29/06/2025 04:50 PM	WATER	ALS: 2 Non ALS: 0	No				X						
046	0960_MW177B_250629		29/06/2025 04:45 PM	WATER	ALS: 2 Non ALS: 0	No				X						
047	0960_MW177C_250629		29/06/2025 04:29 PM	WATER	ALS: 2 Non ALS: 0	No				X						
048	0960_MW176A_250629		29/06/2025 03:02 PM	WATER	ALS: 2 Non ALS: 0	No				X						
049	0960_MW176B_250629		29/06/2025 03:03 PM	WATER	ALS: 2 Non ALS: 0	No				X						



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

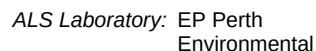
EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

[illegible]



RECEIVED BY:

DATE TIME:

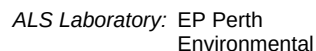
EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

9 of 36



DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

Other comments:

10 of 36

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:			
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:							
PROJECT: WA_0960_PFASOMP_25											
SITE: 0960											
ORDER NO: 12641234/02.2.8											
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]							
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016							
EMAIL REPORTS TO: [REDACTED]											
EMAIL INVOICES TO: accountspayableau@ghd.com											

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
071	0960_SW193_250626		26/06/2025 03:15 PM	WATER	ALS: 2 Non ALS: 0	No				X						
072	0960_SW001_250629		29/06/2025 03:34 PM	WATER	ALS: 2 Non ALS: 0	No							X			
073	0960_SW205_0629		29/06/2025 11:25 AM	WATER	ALS: 4 Non ALS: 0	No							X			
074	0960_SW207_250628		28/06/2025 10:41 AM	WATER	ALS: 2 Non ALS: 0	No							X			
075	0960_SW208_250630		30/06/2025 11:44 AM	WATER	ALS: 2 Non ALS: 0	No								X		
076	0960_SW209_250627		27/06/2025 02:14 PM	WATER	ALS: 2 Non ALS: 0	No								X		
077	0960_SW211_250627		27/06/2025 01:47 PM	WATER	ALS: 2 Non ALS: 0	No								X		

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:			
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:							
PROJECT: WA_0960_PFASOMP_25											
SITE: 0960											
ORDER NO: 12641234/02.2.8											
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]							
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016							
EMAIL REPORTS TO: [REDACTED]											
EMAIL INVOICES TO: accountspayableau@ghd.com											

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
078	0960_SW300_250629		29/06/2025 03:10 PM	WATER	ALS: 2 Non ALS: 0	No							X			
079	0960_SW301_250628		28/06/2025 01:15 PM	WATER	ALS: 2 Non ALS: 0	No								X		
080	0960_SW302_250625		25/06/2025 04:38 PM	WATER	ALS: 2 Non ALS: 0	No		X								
081	0960_SW303_250629			WATER	ALS: 0 Non ALS: 0	No							X			
082	0960_SW304_250629		29/06/2025 05:34 PM	WATER	ALS: 2 Non ALS: 0	No							X			
083	0960_SW305_250627		27/06/2025 03:00 PM	WATER	ALS: 2 Non ALS: 0	No				X						
084	0960_SD199_250628		28/06/2025 11:32 AM	SOIL	ALS: 1 Non ALS: 0	No						X				



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

[illegible]

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: ██████████		CONTACT PH: ██████████		SAMPLER MOBILE: ██████████					
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: ██████████		ghd.labreports@ghd.com, derp.labreports@esdat.com							
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
092	0960_SD123_250623		23/06/2025 01:22 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
093	0960_SD124_250625		25/06/2025 09:38 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
094	0960_SD125_250625		25/06/2025 09:23 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
095	0960_SD157_250625		25/06/2025 02:41 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
096	0960_SD166_250625		25/06/2025 10:37 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
097	0960_SD168_250625		25/06/2025 10:55 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
098	0960_SD170_250625		25/06/2025 02:57 PM	SOIL	ALS: 1 Non ALS: 0	No						X				



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

[illegible]

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED], ghd.labreports@ghd.com, derp.labreports@esdat.com									
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
106	0960_SD234_250624		24/06/2025 08:29 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
107	0960_SD235_250624		24/06/2025 11:10 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
108	0960_SD243_250625		25/06/2025 10:02 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
109	0960_SD265_250625		25/06/2025 02:29 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
110	0960_SD277_250625		01/07/2025 07:30 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
111	0960_SD298_250628		28/06/2025 12:45 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
112	0960_SD279_250625		25/06/2025 11:05 AM	SOIL	ALS: 1 Non ALS: 0	No						X				

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: ██████████		CONTACT PH: ██████████		SAMPLER MOBILE: ██████████					
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: ██████████		ghd.labreports@ghd.com, derp.labreports@esdat.com							
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
113	0960_SD288_250626		26/06/2025 02:38 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
114	0960_SD291_250624		24/06/2025 02:27 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
115	0960_SD292_250624		24/06/2025 02:44 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
116	0960_SD293_250624		24/06/2025 03:01 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
117	0960_SD278_250625		25/06/2025 09:14 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
118	0960_SD205_250629		29/06/2025 11:24 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
119	0960_SD207_250628		28/06/2025 10:43 AM	SOIL	ALS: 1 Non ALS: 0	No						X				



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

[illegible]

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED]		, ghd.labreports@ghd.com, derp.labreports@esdat.com							
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
127	0960_SD303_250629		29/06/2025 05:18 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
128	0960_SD304_250629		29/06/2025 05:35 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
129	0960_SD305_250627		27/06/2025 02:59 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
130	0960_SD009_250628		28/06/2025 01:16 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
131	0960_QC101_250623		23/06/2025 02:35 PM	WATER	ALS: 2 Non ALS: 0	No		X								
132	0960_QC401_250623		23/06/2025 04:28 PM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
133	0960_QC301_250623		23/06/2025 04:29 PM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8		CONTACT PH: SAMPLER MOBILE:							
PROJECT MANAGER:		QUOTE NO: EP24GHD SER0016 / EP2024GHD SER0016							
PRIMARY SAMPLER:									
EMAIL REPORTS TO:									
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
134	0960_QC103_250624		24/06/2025 02:45 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
135	0960_QC102_250624		24/06/2025 08:58 AM	WATER	ALS: 2 Non ALS: 0	No		X								
136	0960_SD198_250624		24/06/2025 03:11 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
137	0960_QC402_250624		24/06/2025 04:45 PM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
138	0960_QC302_250624		24/06/2025 04:47 PM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
139	0960_QC104_250625		25/06/2025 10:54 AM	SOIL	ALS: 1 Non ALS: 0	No						X				
140	0960_MW229_250624		25/06/2025 11:32 AM	WATER	ALS: 2 Non ALS: 0	No			X							

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: ██████████		CONTACT PH: ██████████		SAMPLER MOBILE: ██████████					
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: ██████████				ghd.labreports@ghd.com, derp.labreports@esdat.com					
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
141	0960_MW230_250624		25/06/2025 11:36 AM	WATER	ALS: 4 Non ALS: 0	No			X							
142	0960_MW227_250624		25/06/2025 11:39 AM	WATER	ALS: 2 Non ALS: 0	No			X							
143	0960_QC105_250625		25/06/2025 12:50 PM	WATER	ALS: 2 Non ALS: 0	No		X								
144	0960_MW239_250625		25/06/2025 04:07 PM	WATER	ALS: 2 Non ALS: 0	No		X								
145	0960_QC403_250625		26/06/2025 09:54 AM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
146	0960_QC303_250625		26/06/2025 09:56 AM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
147	0960_MW132_250626			WATER	ALS: 0 Non ALS: 0	No			X							

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:								
CLIENT: GHD SER - GHD PTY LTD PROJECT: WA_0960_PFASOMP_25 SITE: 0960 ORDER NO: 12641234/02.2.8 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED] EMAIL INVOICES TO: accountspayableau@ghd.com		CONTACT PH: [REDACTED] QUOTE NO: EP24GHD SER0016		SAMPLER MOBILE: [REDACTED] / EP2024GHD SER0016		TURNAROUND REQUIREMENTS : 5 Days Biohazard info: LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:										
SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
148	0960_QC106_250626		26/06/2025 11:53 AM	WATER	ALS: 2 Non ALS: 0	No			X							
149	0960_MW174_250626		26/06/2025 11:53 AM	WATER	ALS: 2 Non ALS: 0	No			X							
150	0960_QC107_250626		26/06/2025 03:36 PM	SOIL	ALS: 1 Non ALS: 0	No						X				
151	0960_MW228_250627		27/06/2025 09:02 AM	WATER	ALS: 2 Non ALS: 0	No			X							
152	0960_QC304_250626		27/06/2025 09:31 AM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
153	0960_QC404_250626		27/06/2025 09:34 AM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3									
154	0960_QC405_250627		27/06/2025 09:39 AM	WATER	ALS: 2 Non ALS: 0	No	X									

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: [REDACTED]				, ghd.labreports@ghd.com, derp.labreports@esdat.com					
EMAIL INVOICES TO: accountspayableau@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
155	0960_QC305_250627		27/06/2025 11:25 AM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
156	0960_QC108_250627		27/06/2025 05:06 PM	WATER	ALS: 2 Non ALS: 0	No		X								
157	0960_QC406_250628		28/06/2025 08:47 AM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3									
158	0960_QC306_250628		28/06/2025 11:00 AM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3									
159	0960_QC110_250629		29/06/2025 10:22 AM	WATER	ALS: 2 Non ALS: 0	No				X						
160	0960_QC407_250629		29/06/2025 10:33 AM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3									
161	0960_QC307_250629		29/06/2025 10:43 AM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3									



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8		CONTACT PH: SAMPLER MOBILE:							
PROJECT MANAGER:		QUOTE NO: EP24GHD SER0016 / EP2024GHD SER0016							
PRIMARY SAMPLER:									
EMAIL REPORTS TO: , ghd.labreports@ghd.com, derp.labreports@esdat.com									
EMAIL INVOICES TO: accounts payable@ghd.com									

SAMPLE DETAILS							ANALYSIS REQUIRED									
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Field Blank (PFAS) - Water WATER	Groundwater - PFAS GROUNDWATER	Groundwater - PFAS-LL WATER	Groundwater - SUT PFAS WATER	Rinsate (PFAS) RINSATE	Soil & Sediment - PFAS SOIL	Surface/Pore Water - PFAS SURFACE WATER	Surface/Pore Water - SUT PFAS WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
169	0960_QC408_250630		30/06/2025 02:23 PM	WATER	ALS: 2 Non ALS: 0	No	Partial 1/3									
170	0960_QC308_250630		30/06/2025 02:25 PM	WATER	ALS: 2 Non ALS: 0	No					Partial 1/3					
171	0960_SD227_250625		01/07/2025 07:31 AM	WATER	ALS: 0 Non ALS: 0	No						X				



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

Friday, July 4, 2025 8:09:12 AM 26 of 36



CHAIN OF CUSTODY

COC#: 79896

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHD SER - GHD PTY LTD

PROJECT: WA_0960_PFASOMP_25

SITE: 0960

ORDER NO: 12641234/02.2.8

PROJECT MANAGER: [REDACTED]

PRIMARY SAMPLER: [REDACTED]

CONTACT PH: [REDACTED]

QUOTE NO: EP24GHD SER0016

SAMPLER MOBILE: [REDACTED]

/ EP2024GHD SER0016

EMAIL REPORTS TO: [REDACTED] ghd.labreports@ghd.com, derp.labreports@esdat.com

EMAIL INVOICES TO: accountspayableau@ghd.com

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0960_MW021_250623	HDPE (no PTFE)	20 mL	00352407217119	Grey	No	
001	0960_MW021_250623	HDPE (no PTFE)	20 mL	00352407217137	Grey	No	
002	0960_MW113_250623	HDPE (no PTFE)	20 mL	00352407217244	Grey	No	
002	0960_MW113_250623	HDPE (no PTFE)	20 mL	00352407217183	Grey	No	
002	0960_MW113_250623	HDPE (no PTFE)	20 mL	00352407216911	Grey	No	
002	0960_MW113_250623	HDPE (no PTFE)	20 mL	00352407217073	Grey	No	
003	0960_MW114_250623	HDPE (no PTFE)	20 mL	00352407217234	Grey	No	
003	0960_MW114_250623	HDPE (no PTFE)	20 mL	00352407216964	Grey	No	
004	0960_MW233_250623	HDPE (no PTFE)	20 mL	00352407217122	Grey	No	
004	0960_MW233_250623	HDPE (no PTFE)	20 mL	00352407217198	Grey	No	
005	0960_MW211_250623	HDPE (no PTFE)	20 mL	00352407217045	Grey	No	
005	0960_MW211_250623	HDPE (no PTFE)	20 mL	00352407217321	Grey	No	
006	0960_MW162_250623	HDPE (no PTFE)	20 mL	00352407217257	Grey	No	
006	0960_MW162_250623	HDPE (no PTFE)	20 mL	00352407217279	Grey	No	
007	0960_MW164_250623	HDPE (no PTFE)	20 mL	00352407217110	Grey	No	
007	0960_MW164_250623	HDPE (no PTFE)	20 mL	00352407216994	Grey	No	
008	0960_MW018_250623	HDPE (no PTFE)	20 mL	00352407217288	Grey	No	
008	0960_MW018_250623	HDPE (no PTFE)	20 mL	00352407217041	Grey	No	
009	0960_MW165_250623	HDPE (no PTFE)	20 mL	00352407217315	Grey	No	
009	0960_MW165_250623	HDPE (no PTFE)	20 mL	00352407216961	Grey	No	
010	0960_MW166_250623	HDPE (no PTFE)	20 mL	00352407216868	Grey	No	
010	0960_MW166_250623	HDPE (no PTFE)	20 mL	00352407217125	Grey	No	
011	0960_MW167_250623	HDPE (no PTFE)	20 mL	00352407216808	Grey	No	
011	0960_MW167_250623	HDPE (no PTFE)	20 mL	00352407216822	Grey	No	
012	0960_MW168_250623	HDPE (no PTFE)	20 mL	00352407217238	Grey	No	
012	0960_MW168_250623	HDPE (no PTFE)	20 mL	00352407217241	Grey	No	

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:			
CLIENT: GHD SER - GHD PTY LTD		DATE TIME:		DATE TIME:		DATE TIME:		DATE TIME:			
PROJECT: WA_0960_PFASOMP_25		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle)							
SITE: 0960											
ORDER NO: 12641234/02.2.8		Biohazard info:		Custody Seal intact? Yes No N/A							
PROJECT MANAGER: ██████████		CONTACT PH: ██████████		SAMPLER MOBILE: ██████████		Free ice / frozen ice bricks present upon receipt? Yes No N/A					
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016		Random Sample Temperature on Receipt: °C					
EMAIL REPORTS TO: ██████████		ghd.labreports@ghd.com, derp.labreports@esdat.com		Other comments:							
EMAIL INVOICES TO: accountspayableau@ghd.com											
013	0960_MW112_250623	HDPE (no PTFE)	20 mL	00352407217060	Grey	No					
013	0960_MW112_250623	HDPE (no PTFE)	20 mL	00352407216909	Grey	No					
013	0960_MW112_250623	HDPE (no PTFE)	20 mL	00352407217293	Grey	No					
013	0960_MW112_250623	HDPE (no PTFE)	20 mL	00352407217111	Grey	No					
014	0960_MW115_250625	HDPE (no PTFE)	20 mL	00352407216967	Grey	No					
014	0960_MW115_250625	HDPE (no PTFE)	20 mL	00352407217179	Grey	No					
015	0960_MW105_250624	HDPE (no PTFE)	20 mL	00352407216801	Grey	No					
015	0960_MW105_250624	HDPE (no PTFE)	20 mL	00352407216856	Grey	No					
016	0960_MW148D_250623	HDPE (no PTFE)	20 mL	00352407216759	Grey	No					
016	0960_MW148D_250623	HDPE (no PTFE)	20 mL	00352407217127	Grey	No					
017	0960_MW148S_250623	HDPE (no PTFE)	20 mL	00352407217039	Grey	No					
017	0960_MW148S_250623	HDPE (no PTFE)	20 mL	00352407216837	Grey	No					
018	0960_MW151_250630	HDPE (no PTFE)	20 mL	00352407217203	Grey	No					
018	0960_MW151_250630	HDPE (no PTFE)	20 mL	00352407216741	Grey	No					
019	0960_MW159_250630	HDPE (no PTFE)	20 mL	00352407216976	Grey	No					
019	0960_MW159_250630	HDPE (no PTFE)	20 mL	00352407216983	Grey	No					
020	0960_MW122_250624	HDPE (no PTFE)	20 mL	00352407217123	Grey	No					
020	0960_MW122_250624	HDPE (no PTFE)	20 mL	00352407216965	Grey	No					
021	0960_MW146A_250627	HDPE (no PTFE)	20 mL	00352312075845	Grey	No					
021	0960_MW146A_250627	HDPE (no PTFE)	20 mL	00352312075980	Grey	No					
022	0960_MW147A_250627	HDPE (no PTFE)	20 mL	00352312075742	Grey	No					
022	0960_MW147A_250627	HDPE (no PTFE)	20 mL	00352312076273	Grey	No					
023	0960_MW180A_250628	HDPE (no PTFE)	20 mL	00352407216783	Grey	No					
023	0960_MW180A_250628	HDPE (no PTFE)	20 mL	00352407217145	Grey	No					
024	0960_MW181A_250628	HDPE (no PTFE)	20 mL	00350522046460	Grey	No					
024	0960_MW181A_250628	HDPE (no PTFE)	20 mL	00350522046455	Grey	No					
025	0960_MW172_250626	HDPE (no PTFE)	20 mL	00352407217196	Grey	No					

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD PROJECT: WA_0960_PFASOMP_25 SITE: 0960 ORDER NO: 12641234/02.2.8 PROJECT MANAGER: ██████████ PRIMARY SAMPLER: ██████████ EMAIL REPORTS TO: ██████████, ghd.labreports@ghd.com, derp.labreports@esdat.com EMAIL INVOICES TO: accountspayableau@ghd.com		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
025	0960_MW172_250626	HDPE (no PTFE)	20 mL	00352407216858	Grey	No			
026	0960_MW170_250625	HDPE (no PTFE)	20 mL	00352407216889	Grey	No			
026	0960_MW170_250625	HDPE (no PTFE)	20 mL	00352407217193	Grey	No			
027	0960_MW127_250625	HDPE (no PTFE)	20 mL	00352407217274	Grey	No			
027	0960_MW127_250625	HDPE (no PTFE)	20 mL	00352407216978	Grey	No			
028	0960_MW126_250625	HDPE (no PTFE)	20 mL	00352407216761	Grey	No			
028	0960_MW126_250625	HDPE (no PTFE)	20 mL	00352407216768	Grey	No			
029	0960_MW139_250624	HDPE (no PTFE)	20 mL	00352407216993	Grey	No			
029	0960_MW139_250624	HDPE (no PTFE)	20 mL	00352407216910	Grey	No			
030	0960_MW140A_250628	HDPE (no PTFE)	20 mL	00350522046516	Grey	No			
030	0960_MW140A_250628	HDPE (no PTFE)	20 mL	00350522046342	Grey	No			
031	0960_MW102_250625	HDPE (no PTFE)	20 mL	00352407216908	Grey	No			
032	0960_MW145A_250628	HDPE (no PTFE)	20 mL	00352407216804	Grey	No			
032	0960_MW145A_250628	HDPE (no PTFE)	20 mL	00352407216882	Grey	No			
033	0960_MW103_250624	HDPE (no PTFE)	20 mL	00352407217276	Grey	No			
033	0960_MW103_250624	HDPE (no PTFE)	20 mL	00352407216957	Grey	No			
034	0960_MW104_250624	HDPE (no PTFE)	20 mL	00352407217191	Grey	No			
034	0960_MW104_250624	HDPE (no PTFE)	20 mL	00352407216992	Grey	No			
035	0960_MW134_250625	HDPE (no PTFE)	20 mL	00352407217323	Grey	No			
035	0960_MW134_250625	HDPE (no PTFE)	20 mL	00352407216971	Grey	No			
036	0960_MW135A_250626	HDPE (no PTFE)	20 mL	00352407217251	Grey	No			
036	0960_MW135A_250626	HDPE (no PTFE)	125 mL	00352407216786	Grey	No			
037	0960_MW175A_250630	HDPE (no PTFE)	20 mL	00352407217037	Grey	No			
037	0960_MW175A_250630	HDPE (no PTFE)	20 mL	00352407216863	Grey	No			
038	0960_MW124_250625	HDPE (no PTFE)	20 mL	00352407216814	Grey	No			
038	0960_MW124_250625	HDPE (no PTFE)	20 mL	00352407216830	Grey	No			
039	0960_MW144A_250626	HDPE (no PTFE)	20 mL	00352407217061	Grey	No			

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:			
DATE TIME:		DATE TIME:		DATE TIME:		DATE TIME:					
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle)							
PROJECT: WA_0960_PFASOMP_25											
SITE: 0960		Biohazard info:		Custody Seal intact? Yes No N/A							
ORDER NO: 12641234/02.2.8				Free ice / frozen ice bricks present upon receipt? Yes No N/A							
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]		Random Sample Temperature on Receipt: °C					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016		Other comments:					
EMAIL REPORTS TO: [REDACTED], ghd.labreports@ghd.com, derp.labreports@esdat.com											
EMAIL INVOICES TO: accountspayableau@ghd.com											
039	0960_MW144A_250626	HDPE (no PTFE)	20 mL	00352407217280	Grey	No					
039	0960_MW144A_250626	HDPE (no PTFE)	20 mL	00352407216790	Grey	No					
039	0960_MW144A_250626	HDPE (no PTFE)	20 mL	00352407217046	Grey	No					
040	0960_MW143A_250627	HDPE (no PTFE)	20 mL	00352312076219	Grey	No					
040	0960_MW143A_250627	HDPE (no PTFE)	20 mL	00352312075709	Grey	No					
041	0960_MW137A_250624	HDPE (no PTFE)	125 mL	00350325040416	Grey	No					
041	0960_MW137A_250624	HDPE (no PTFE)	125 mL	00350325040340	Grey	No					
042	0960_MW137B_250624	HDPE (no PTFE)	125 mL	00350325040572	Grey	No					
042	0960_MW137B_250624	HDPE (no PTFE)	125 mL	00350325040552	Grey	No					
043	0960_MW137C_250624	HDPE (no PTFE)	125 mL	00350325040454	Grey	No					
043	0960_MW137C_250624	HDPE (no PTFE)	125 mL	00350325040544	Grey	No					
044	0960_MW137D_250624	HDPE (no PTFE)	125 mL	00350325040346	Grey	No					
044	0960_MW137D_250624	HDPE (no PTFE)	125 mL	00350325040403	Grey	No					
045	0960_MW177A_250629	HDPE (no PTFE)	125 mL	00350325040440	Grey	No					
045	0960_MW177A_250629	HDPE (no PTFE)	125 mL	00350325040522	Grey	No					
046	0960_MW177B_250629	HDPE (no PTFE)	125 mL	00350325040341	Grey	No					
046	0960_MW177B_250629	HDPE (no PTFE)	125 mL	00350325040581	Grey	No					
047	0960_MW177C_250629	HDPE (no PTFE)	125 mL	00350325040374	Grey	No					
047	0960_MW177C_250629	HDPE (no PTFE)	125 mL	00350325040331	Grey	No					
048	0960_MW176A_250629	HDPE (no PTFE)	125 mL	00350325040433	Grey	No					
048	0960_MW176A_250629	HDPE (no PTFE)	125 mL	00350325040329	Grey	No					
049	0960_MW176B_250629	HDPE (no PTFE)	125 mL	00350325040332	Grey	No					
049	0960_MW176B_250629	HDPE (no PTFE)	125 mL	00350325040388	Grey	No					
050	0960_MW176C_250629	HDPE (no PTFE)	125 mL	00350325040566	Grey	No					
050	0960_MW176C_250629	HDPE (no PTFE)	125 mL	00350325040590	Grey	No					
051	0960_MW177D_250629	HDPE (no PTFE)	125 mL	00350325040376	Grey	No					
051	0960_MW177D_250629	HDPE (no PTFE)	125 mL	00350325040424	Grey	No					

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:			
DATE TIME:		DATE TIME:		DATE TIME:		DATE TIME:					
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle)							
PROJECT: WA_0960_PFASOMP_25											
SITE: 0960		Biohazard info:		Custody Seal intact? Yes No N/A							
ORDER NO: 12641234/02.2.8				Free ice / frozen ice bricks present upon receipt? Yes No N/A							
PROJECT MANAGER: [REDACTED]		CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]		Random Sample Temperature on Receipt: C					
PRIMARY SAMPLER: [REDACTED]		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016		Other comments:					
EMAIL REPORTS TO: [REDACTED], ghd.labreports@ghd.com, derp.labreports@esdat.com											
EMAIL INVOICES TO: accountspayableau@ghd.com											
051	0960_MW177D_250629	HDPE (no PTFE)	125 mL	00350325040541	Grey	No					
051	0960_MW177D_250629	HDPE (no PTFE)	125 mL	00350325040569	Grey	No					
052	0960_MW178A_250627	HDPE (no PTFE)	125 mL	00350325040464	Grey	No					
052	0960_MW178A_250627	HDPE (no PTFE)	125 mL	00350325040359	Grey	No					
053	0960_MW178B_250627	HDPE (no PTFE)	125 mL	00350325040561	Grey	No					
053	0960_MW178B_250627	HDPE (no PTFE)	125 mL	00350325040324	Grey	No					
054	0960_MW178C_250627	HDPE (no PTFE)	125 mL	00350325040466	Grey	No					
054	0960_MW178C_250627	HDPE (no PTFE)	125 mL	00350325040470	Grey	No					
055	0960_MW178D_250627	HDPE (no PTFE)	125 mL	00350325040327	Grey	No					
055	0960_MW178D_250627	HDPE (no PTFE)	125 mL	00350325040409	Grey	No					
056	0960_MW179A_250628	HDPE (no PTFE)	125 mL	00350325040348	Grey	No					
056	0960_MW179A_250628	HDPE (no PTFE)	125 mL	00350325040326	Grey	No					
057	0960_MW179B_250628	HDPE (no PTFE)	125 mL	00350325040392	Grey	No					
057	0960_MW179B_250628	HDPE (no PTFE)	125 mL	00350325040435	Grey	No					
058	0960_MW179C_250628	HDPE (no PTFE)	125 mL	00350325040460	Grey	No					
058	0960_MW179C_250628	HDPE (no PTFE)	125 mL	00350325040597	Grey	No					
059	0960_MW179D_250628	HDPE (no PTFE)	125 mL	00350325040408	Grey	No					
059	0960_MW179D_250628	HDPE (no PTFE)	125 mL	00350325040334	Grey	No					
060	0960_MW141A_250629	HDPE (no PTFE)	125 mL	00350325040308	Grey	No					
060	0960_MW141A_250629	HDPE (no PTFE)	125 mL	00350325040306	Grey	No					
061	0960_MW141B_250629	HDPE (no PTFE)	125 mL	00350325040391	Grey	No					
061	0960_MW141B_250629	HDPE (no PTFE)	125 mL	00350325040417	Grey	No					
062	0960_MW141C_250629	HDPE (no PTFE)	125 mL	00350325040579	Grey	No					
062	0960_MW141C_250629	HDPE (no PTFE)	125 mL	00350325040584	Grey	No					
063	0960_MW141D_250629	HDPE (no PTFE)	125 mL	00350325040363	Grey	No					
063	0960_MW141D_250629	HDPE (no PTFE)	125 mL	00350325040333	Grey	No					
064	0960_OTH132_250630	HDPE (no PTFE)	125 mL	00350325040317	Grey	No					



CHAIN OF CUSTODY

COC#: 79896

ALS Laboratory: EP Perth
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: GHDSER - GHD PTY LTD

PROJECT: WA_0960_PFASOMP_25

SITE: 0960

ORDER NO: 12641234/02.2.8

PROJECT MANAGER: [REDACTED]

PRIMARY SAMPLER: [REDACTED]

CONTACT PH: [REDACTED]

QUOTE NO: EP24GHDSER0016

SAMPLER MOBILE: [REDACTED]

/ EP2024GHDSER0016

EMAIL REPORTS TO: [REDACTED], ghd.labreports@ghd.com, derp.labreports@esdat.com

EMAIL INVOICES TO: accountspayableau@ghd.com

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

064	0960_OTH132_250630	HDPE (no PTFE)	125 mL	00350325040320	Grey	No	
065	0960_OTH134_250630	HDPE (no PTFE)	125 mL	00350325040405	Grey	No	
065	0960_OTH134_250630	HDPE (no PTFE)	125 mL	00350325040599	Grey	No	
066	0960_OTH129_250630	HDPE (no PTFE)	125 mL	00350325040539	Grey	No	
066	0960_OTH129_250630	HDPE (no PTFE)	125 mL	00350325040508	Grey	No	
067	0960_OTH103_250630	HDPE (no PTFE)	125 mL	00350325040343	Grey	No	
067	0960_OTH103_250630	HDPE (no PTFE)	125 mL	00350325040509	Grey	No	
068	0960_OTH106_250629	HDPE (no PTFE)	125 mL	00350325040381	Grey	No	
068	0960_OTH106_250629	HDPE (no PTFE)	125 mL	00350325040350	Grey	No	
069	0960_OTH107_250629	HDPE (no PTFE)	125 mL	00350325040383	Grey	No	
069	0960_OTH107_250629	HDPE (no PTFE)	125 mL	00350325040349	Grey	No	
070	0960_SW192_250626	HDPE (no PTFE)	125 mL	00350325040494	Grey	No	
070	0960_SW192_250626	HDPE (no PTFE)	125 mL	00350325040473	Grey	No	
071	0960_SW193_250626	HDPE (no PTFE)	20 mL	00352407217151	Grey	No	
071	0960_SW193_250626	HDPE (no PTFE)	20 mL	00352407217259	Grey	No	
072	0960_SW001_250629	HDPE (no PTFE)	20 mL	00352407216796	Grey	No	
072	0960_SW001_250629	HDPE (no PTFE)	20 mL	00352407216871	Grey	No	
073	0960_SW205_0629	HDPE (no PTFE)	20 mL	00352407217316	Grey	No	
073	0960_SW205_0629	HDPE (no PTFE)	20 mL	00350522046723	Grey	No	
073	0960_SW205_0629	HDPE (no PTFE)	20 mL	00352407216795	Grey	No	
073	0960_SW205_0629	HDPE (no PTFE)	20 mL	00350522046402	Grey	No	
074	0960_SW207_250628	HDPE (no PTFE)	20 mL	00352407217043	Grey	No	
074	0960_SW207_250628	HDPE (no PTFE)	20 mL	00352407217229	Grey	No	
075	0960_SW208_250630	HDPE (no PTFE)	125 mL	00350325040510	Grey	No	
075	0960_SW208_250630	HDPE (no PTFE)	125 mL	00350325040428	Grey	No	
076	0960_SW209_250627	HDPE (no PTFE)	125 mL	00350325040313	Grey	No	
076	0960_SW209_250627	HDPE (no PTFE)	125 mL	00350325040535	Grey	No	



ALS Laboratory: EP Perth
Environmental

RECEIVED BY:

DATE TIME:

EMAIL INVOICES TO: accountspayableau@ghd.com

Biohazard info:

LABORATORY USE ONLY (Circle)

Other comments:

Friday, July 4, 2025 8:09:12 AM 33 of 36

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:			
CLIENT: GHD SER - GHD PTY LTD		DATE TIME:		DATE TIME:		DATE TIME:		DATE TIME:			
PROJECT: WA_0960_PFASOMP_25		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle)							
SITE: 0960											
ORDER NO: 12641234/02.2.8		Biohazard info:		Custody Seal intact? Yes No N/A							
PROJECT MANAGER: ██████████		CONTACT PH: ██████████		Free ice / frozen ice bricks present upon receipt? Yes No N/A							
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016		SAMPLER MOBILE: ██████████		Random Sample Temperature on Receipt: °C					
EMAIL REPORTS TO: ██████████		ghd.labreports@ghd.com, derp.labreports@esdat.com		Other comments:							
EMAIL INVOICES TO: accountspayableau@ghd.com											
099	0960_SD174_250625	HDPE Soil Jar	200 mL	00621122108650	Grey	No					
100	0960_SD176_250625	HDPE Soil Jar	200 mL	00621024034582	Grey	No					
101	0960_SD189_250625	HDPE Soil Jar	200 mL	00621024034685	Grey	No					
102	0960_SD190_250626	HDPE Soil Jar	200 mL	00621024034587	Grey	No					
103	0960_SD192_250626	HDPE Soil Jar	200 mL	00621024034659	Grey	No					
104	0960_SD193_250626	HDPE Soil Jar	200 mL	00621024034665	Grey	No					
105	0960_SD231_350624	HDPE Soil Jar	200 mL	00621024034614	Grey	No					
106	0960_SD234_250624	HDPE Soil Jar	200 mL	00621024034591	Grey	No					
107	0960_SD235_250624	HDPE Soil Jar	200 mL	00621024034681	Grey	No					
108	0960_SD243_250625	HDPE Soil Jar	200 mL	00621024034654	Grey	No					
109	0960_SD265_250625	HDPE Soil Jar	200 mL	00621024034548	Grey	No					
110	0960_SD277_250625	HDPE Soil Jar	200 mL	00621024034580	Grey	No					
111	0960_SD298_250628	HDPE Soil Jar	200 mL	00621222007584	Grey	No					
112	0960_SD279_250625	HDPE Soil Jar	200 mL	00621024034673	Grey	No					
113	0960_SD288_250626	HDPE Soil Jar	200 mL	00621024034674	Grey	No					
114	0960_SD291_250624	HDPE Soil Jar	200 mL	00621024034542	Grey	No					
115	0960_SD292_250624	HDPE Soil Jar	200 mL	00621024034595	Grey	No					
116	0960_SD293_250624	HDPE Soil Jar	200 mL	00621024034683	Grey	No					
117	0960_SD278_250625	HDPE Soil Jar	200 mL	00621024034572	Grey	No					
118	0960_SD205_250629	HDPE Soil Jar	200 mL	00621024034597	Grey	No					
119	0960_SD207_250628	HDPE Soil Jar	200 mL	00621024034641	Grey	No					
120	0960_SD208_250630	HDPE Soil Jar	200 mL	00621024034688	Grey	No					
121	0960_SD209_250627	HDPE Soil Jar	200 mL	00621024034545	Grey	No					
122	0960_SD210_250624	HDPE Soil Jar	200 mL	00621024034616	Grey	No					
123	0960_SD211_250627	HDPE Soil Jar	200 mL	00621024034546	Grey	No					
124	0960_SD300_250629	HDPE Soil Jar	200 mL	00621024034558	Grey	No					
125	0960_SD301_250629	HDPE Soil Jar	200 mL	00621222007606	Grey	No					

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:					
PROJECT: WA_0960_PFASOMP_25									
SITE: 0960		Biohazard info:							
ORDER NO: 12641234/02.2.8									
PROJECT MANAGER: ██████████		CONTACT PH: ██████████		SAMPLER MOBILE: ██████████					
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016		/ EP2024GHD SER0016					
EMAIL REPORTS TO: ██████████ghd.com, ██████████ghd.com, ghd.labreports@ghd.com, derp.labreports@esdat.com									
EMAIL INVOICES TO: accountspayableau@ghd.com									
126	0960_SD302_250625	HDPE Soil Jar	200 mL	00621024034619	Grey	No			
127	0960_SD303_250629	HDPE Soil Jar	200 mL	00621024034603	Grey	No			
128	0960_SD304_250629	HDPE Soil Jar	200 mL	00621024034669	Grey	No			
129	0960_SD305_250627	HDPE Soil Jar	200 mL	00621024034579	Grey	No			
130	0960_SD009_250628	HDPE Soil Jar	200 mL	00621222007643	Grey	No			
131	0960_QC101_250623	HDPE (no PTFE)	20 mL	00352407217089	Grey	No			
131	0960_QC101_250623	HDPE (no PTFE)	20 mL	00352407216874	Grey	No			
132	0960_QC401_250623	HDPE (no PTFE)	20 mL	00352407217109	Grey	No			
132	0960_QC401_250623	HDPE (no PTFE)	20 mL	00352407216970	Grey	No			
133	0960_QC301_250623	HDPE (no PTFE)	20 mL	00352407216903	Grey	No			
133	0960_QC301_250623	HDPE (no PTFE)	20 mL	00352407217152	Grey	No			
134	0960_QC103_250624	HDPE Soil Jar	200 mL	00621024034621	Grey	No			
135	0960_QC102_250624	HDPE (no PTFE)	20 mL	00352407217194	Grey	No			
135	0960_QC102_250624	HDPE (no PTFE)	20 mL	00352407216935	Grey	No			
136	0960_SD198_250624	HDPE Soil Jar	200 mL	00621024034566	Grey	No			
137	0960_QC402_250624	HDPE (no PTFE)	20 mL	00352407216824	Grey	No			
137	0960_QC402_250624	HDPE (no PTFE)	20 mL	00352407217096	Grey	No			
138	0960_QC302_250624	HDPE (no PTFE)	20 mL	00352407217095	Grey	No			
138	0960_QC302_250624	HDPE (no PTFE)	20 mL	00352407216960	Grey	No			
139	0960_QC104_250625	HDPE Soil Jar	200 mL	00621122108709	Grey	No			
140	0960_MW229_250624	HDPE (no PTFE)	20 mL	00352407217130	Grey	No			
140	0960_MW229_250624	HDPE (no PTFE)	20 mL	00352407217192	Grey	No			
141	0960_MW230_250624	HDPE (no PTFE)	20 mL	00352407217142	Grey	No			
141	0960_MW230_250624	HDPE (no PTFE)	20 mL	00352407217289	Grey	No			
141	0960_MW230_250624	HDPE (no PTFE)	125 mL	00352407217136	Grey	No			
141	0960_MW230_250624	HDPE (no PTFE)	20 mL	00352407217248	Grey	No			
142	0960_MW227_250624	HDPE (no PTFE)	20 mL	00352407216833	Grey	No			

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:		
		DATE TIME:		DATE TIME:		DATE TIME:		DATE TIME:		
CLIENT: GHD SER - GHD PTY LTD		TURNAROUND REQUIREMENTS : 5 Days			LABORATORY USE ONLY (Circle)					
PROJECT: WA_0960_PFASOMP_25										
SITE: 0960		Biohazard info:			Custody Seal intact? Yes No N/A					
ORDER NO: 12641234/02.2.8					Free ice / frozen ice bricks present upon receipt? Yes No N/A					
PROJECT MANAGER: ██████████		CONTACT PH: ██████████			SAMPLER MOBILE: ██████████			Random Sample Temperature on Receipt: °C		
PRIMARY SAMPLER: ██████████		QUOTE NO: EP24GHD SER0016			/ EP2024GHD SER0016			Other comments:		
EMAIL REPORTS TO: ██████████ghd.com, ██████████ghd.com, ghd.labreports@ghd.com, derp.labreports@esdat.com										
EMAIL INVOICES TO: accountspayableau@ghd.com										
142	0960_MW227_250624	HDPE (no PTFE)	20 mL	00352407216939	Grey	No				
143	0960_QC105_250625	HDPE (no PTFE)	20 mL	00352407216738	Grey	No				
143	0960_QC105_250625	HDPE (no PTFE)	20 mL	00352407217313	Grey	No				
144	0960_MW239_250625	HDPE (no PTFE)	20 mL	00352407216966	Grey	No				
144	0960_MW239_250625	HDPE (no PTFE)	20 mL	00352407217115	Grey	No				
145	0960_QC403_250625	HDPE (no PTFE)	20 mL	00352407216925	Grey	No				
145	0960_QC403_250625	HDPE (no PTFE)	20 mL	00352407217050	Grey	No				
146	0960_QC303_250625	HDPE (no PTFE)	20 mL	00352407217245	Grey	No				
146	0960_QC303_250625	HDPE (no PTFE)	20 mL	00352407217266	Grey	No				
148	0960_QC106_250626	HDPE (no PTFE)	20 mL	00352407216775	Grey	No				
148	0960_QC106_250626	HDPE (no PTFE)	20 mL	00352407216867	Grey	No				
149	0960_MW174_250626	HDPE (no PTFE)	20 mL	00352407216987	Grey	No				
149	0960_MW174_250626	HDPE (no PTFE)	20 mL	00352407216905	Grey	No				
150	0960_QC107_250626	HDPE Soil Jar	200 mL	00621024034672	Grey	No				
151	0960_MW228_250627	HDPE (no PTFE)	20 mL	00352407217267	Grey	No				
151	0960_MW228_250627	HDPE (no PTFE)	20 mL	00352407217126	Grey	No				
152	0960_QC304_250626	HDPE (no PTFE)	20 mL	00350522046699	Grey	No				
152	0960_QC304_250626	HDPE (no PTFE)	20 mL	00350522046766	Grey	No				
153	0960_QC404_250626	HDPE (no PTFE)	20 mL	00352312075927	Grey	No				
153	0960_QC404_250626	HDPE (no PTFE)	20 mL	00352312076000	Grey	No				
154	0960_QC405_250627	HDPE (no PTFE)	20 mL	00350522046321	Grey	No				
154	0960_QC405_250627	HDPE (no PTFE)	20 mL	00350522046570	Grey	No				
155	0960_QC305_250627	HDPE (no PTFE)	20 mL	00350522046304	Grey	No				
155	0960_QC305_250627	HDPE (no PTFE)	20 mL	00350522046378	Grey	No				
156	0960_QC108_250627	HDPE (no PTFE)	20 mL	00350522046366	Grey	No				
156	0960_QC108_250627	HDPE (no PTFE)	20 mL	00350522046408	Grey	No				
157	0960_QC406_250628	HDPE (no PTFE)	20 mL	00352407216861	Grey	No				

 CHAIN OF CUSTODY COC#: 79896 ALS Laboratory: EP Perth Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: GHD SER - GHD PTY LTD PROJECT: WA_0960_PFASOMP_25 SITE: 0960 ORDER NO: 12641234/02.2.8 PROJECT MANAGER: ██████████ PRIMARY SAMPLER: ██████████ EMAIL REPORTS TO: ██████████ghd.com, ██████████ghd.com, ghd.labreports@ghd.com, derp.labreports@esdat.com EMAIL INVOICES TO: accountspayableau@ghd.com		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
157	0960_QC406_250628	HDPE (no PTFE)	20 mL	00352407216800	Grey	No			
158	0960_QC306_250628	HDPE (no PTFE)	20 mL	00350522046519	Grey	No			
158	0960_QC306_250628	HDPE (no PTFE)	20 mL	00350522046763	Grey	No			
159	0960_QC110_250629	HDPE (no PTFE)	125 mL	00350325040361	Grey	No			
159	0960_QC110_250629	HDPE (no PTFE)	125 mL	00350325040322	Grey	No			
160	0960_QC407_250629	HDPE (no PTFE)	20 mL	00352407216791	Grey	No			
160	0960_QC407_250629	HDPE (no PTFE)	20 mL	00352407216870	Grey	No			
161	0960_QC307_250629	HDPE (no PTFE)	20 mL	00352312076291	Grey	No			
161	0960_QC307_250629	HDPE (no PTFE)	20 mL	00352312076450	Grey	No			
162	0960_QC111_250629	HDPE (no PTFE)	20 mL	00352407216739	Grey	No			
162	0960_QC111_250629	HDPE (no PTFE)	20 mL	00352407217308	Grey	No			
163	0960_MW222_250630	HDPE (no PTFE)	20 mL	00352312075946	Grey	No			
163	0960_MW222_250630	HDPE (no PTFE)	20 mL	00352312076064	Grey	No			
164	0960_QC112_250630	HDPE (no PTFE)	20 mL	00352407217210	Grey	No			
164	0960_QC112_250630	HDPE (no PTFE)	20 mL	00352407216981	Grey	No			
165	0960_QC115_250630	HDPE (no PTFE)	125 mL	00350325040344	Grey	No			
165	0960_QC115_250630	HDPE (no PTFE)	125 mL	00350325040328	Grey	No			
166	0960_QC114_250630	HDPE (no PTFE)	125 mL	00350325040315	Grey	No			
166	0960_QC114_250630	HDPE (no PTFE)	125 mL	00350325040461	Grey	No			
167	0960_QC113_250630	HDPE Soil Jar	200 mL	00621024034626	Grey	No			
168	0960_QC116_250630	HDPE (no PTFE)	20 mL	00352407217176	Grey	No			
168	0960_QC116_250630	HDPE (no PTFE)	20 mL	00352407217273	Grey	No			
169	0960_QC408_250630	HDPE (no PTFE)	20 mL	00352312075954	Grey	No			
169	0960_QC408_250630	HDPE (no PTFE)	20 mL	00352312076328	Grey	No			
170	0960_QC308_250630	HDPE (no PTFE)	20 mL	00350522046487	Grey	No			
170	0960_QC308_250630	HDPE (no PTFE)	20 mL	00350522046535	Grey	No			
Total Bottle Count: ALS: 295, Non ALS: 0									

GHD Pty Ltd WA
999 Hay Street Perth
Perth
WA 6004



NATA Accredited
Accreditation Number 2377
Site Number 2370 & 2554

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:



Report 1241100-W-V2
Project name
Project ID WA_0960_PFASOMP_25
Received Date Jul 04, 2025

Client Sample ID			0960_QC201_2 50623	0960_QC202_2 50625	0960_QC205_2 50625	0960_QC206_2 50626
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016622	L25-JI0016623	L25-JI0016626	L25-JI0016627
Date Sampled			Jun 23, 2025	Jun 24, 2025	Jun 25, 2025	Jun 26, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	2.0	< 0.05	< 0.05	-
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	2.9	< 0.01	< 0.01	-
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	3.7	< 0.01	< 0.01	-
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.05	ug/L	^{N09} 5.6	< 0.05	< 0.05	-
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	^{N09} 0.92	< 0.01	< 0.01	-
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	0.05	< 0.01	< 0.01	-
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
13C4-PFBA (surr.)	1	%	^J -32	51	^J -38	-
13C5-PFPeA (surr.)	1	%	^J -40	65	50	-
13C5-PFHxA (surr.)	1	%	^J -41	65	52	-
13C4-PFHpA (surr.)	1	%	^J -39	64	52	-
13C8-PFOA (surr.)	1	%	^J -38	64	52	-
13C5-PFNA (surr.)	1	%	^J -39	63	^J -48	-
13C6-PFDA (surr.)	1	%	^J -39	64	51	-
13C2-PFUnDA (surr.)	1	%	^J -39	62	^J -49	-
13C2-PFDoDA (surr.)	1	%	^J -40	62	50	-
13C2-PFTeDA (surr.)	1	%	^J -43	53	^J -46	-
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	-
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	-
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 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	-
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	-
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	-
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	-
13C8-FOSA (surr.)	1	%	^J -37	60	^J -48	-
D3-N-MeFOSA (surr.)	1	%	^J -49	73	60	-

Client Sample ID			0960_QC201_2 50623	0960_QC202_2 50625	0960_QC205_2 50625	0960_QC206_2 50626
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016622	L25-JI0016623	L25-JI0016626	L25-JI0016627
Date Sampled			Jun 23, 2025	Jun 24, 2025	Jun 25, 2025	Jun 26, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	64	95	79	-
D7-N-MeFOSE (surr.)	1	%	^J 33	51	^J 44	-
D9-N-EtFOSE (surr.)	1	%	^J 34	52	^J 43	-
D5-N-EtFOSAA (surr.)	1	%	^J 35	57	^J 45	-
D3-N-MeFOSAA (surr.)	1	%	^J 34	55	^J 43	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 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	-
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 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	-
13C2-4:2 FTSA (surr.)	1	%	^J 36	67	50	-
13C2-6:2 FTSA (surr.)	1	%	^J 39	63	53	-
13C2-8:2 FTSA (surr.)	1	%	^J 36	56	^J 45	-
13C2-10:2 FTSA (surr.)	1	%	^J 39	59	^J 46	-
Perfluoroalkyl sulfonic acids (PFSA)						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	0.15	0.04	< 0.01	-
Perfluorononanesulfonic acid (PFNS) ^{*N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
Perfluoropropanesulfonic acid (PFPrS) ^{*N15}	0.01	ug/L	0.05	0.02	< 0.01	-
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	^{N09} 0.16	^{N09} 0.02	< 0.01	-
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	^{N09} 1.8	^{N09} 0.09	< 0.01	-
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	^{N09} 0.08	< 0.01	< 0.01	-
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	^{N09} 1.3	< 0.01	< 0.01	-
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	-
13C3-PFBS (surr.)	1	%	^J 38	63	51	-
18O2-PFHxS (surr.)	1	%	^J 35	60	^J 48	-
13C8-PFOS (surr.)	1	%	^J 36	60	^J 48	-
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	3.1	0.09	< 0.01	-
Sum of PFASs (n=30)*	0.1	ug/L	18.71	0.17	< 0.1	-
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	2.22	< 0.01	< 0.01	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	4.02	0.09	< 0.01	-
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	18.37	0.13	< 0.05	-
Perfluoroalkyl sulfonamido substances- Trace						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) ^{N11}	0.005	ug/L	-	-	-	< 0.005
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	0.005	ug/L	-	-	-	< 0.005
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
13C8-FOSA (surr.)	1	%	-	-	-	86
D3-N-MeFOSA (surr.)	1	%	-	-	-	129

Client Sample ID			0960_QC201_2 50623	0960_QC202_2 50625	0960_QC205_2 50625	0960_QC206_2 50626
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016622	L25-JI0016623	L25-JI0016626	L25-JI0016627
Date Sampled			Jun 23, 2025	Jun 24, 2025	Jun 25, 2025	Jun 26, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances- Trace						
D5-N-EtFOSA (surr.)	1	%	-	-	-	^{J+} 167
D7-N-MeFOSE (surr.)	1	%	-	-	-	77
D9-N-EtFOSE (surr.)	1	%	-	-	-	87
D5-N-EtFOSAA (surr.)	1	%	-	-	-	107
D3-N-MeFOSAA (surr.)	1	%	-	-	-	101
Perfluoroalkyl carboxylic acids (PFCAs) - Trace						
Perfluorobutanoic acid (PFBA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
Perfluoropentanoic acid (PFPeA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorohexanoic acid (PFHxA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
Perfluorooctanoic acid (PFOA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorononanoic acid (PFNA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorodecanoic acid (PFDA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	0.001	ug/L	-	-	-	< 0.001
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
13C4-PFBA (surr.)	1	%	-	-	-	^{J+} 164
13C5-PFPeA (surr.)	1	%	-	-	-	148
13C5-PFHxA (surr.)	1	%	-	-	-	135
13C4-PFHpA (surr.)	1	%	-	-	-	136
13C8-PFOA (surr.)	1	%	-	-	-	135
13C5-PFNA (surr.)	1	%	-	-	-	129
13C6-PFDA (surr.)	1	%	-	-	-	131
13C2-PFUnDA (surr.)	1	%	-	-	-	118
13C2-PFDoDA (surr.)	1	%	-	-	-	110
13C2-PFTeDA (surr.)	1	%	-	-	-	^J 48
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) ^{N11}	0.005	ug/L	-	-	-	< 0.005
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.001	ug/L	-	-	-	< 0.001
13C2-4:2 FTSA (surr.)	1	%	-	-	-	137
13C2-6:2 FTSA (surr.)	1	%	-	-	-	148
13C2-8:2 FTSA (surr.)	1	%	-	-	-	120
13C2-10:2 FTSA (surr.)	1	%	-	-	-	144
Perfluoroalkyl sulfonic acids (PFSA)- Trace						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorononanesulfonic acid (PFNS) ^{*N15}	0.001	ug/L	-	-	-	< 0.001
Perfluoropropanesulfonic acid (PFPrS) ^{*N15}	0.001	ug/L	-	-	-	< 0.001
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.001	ug/L	-	-	-	< 0.001
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.001	ug/L	-	-	-	< 0.001
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.001	ug/L	-	-	-	< 0.001
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.001	ug/L	-	-	-	< 0.001
13C3-PFBS (surr.)	1	%	-	-	-	132

Client Sample ID			0960_QC201_2 50623	0960_QC202_2 50625	0960_QC205_2 50625	0960_QC206_2 50626
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016622	L25-JI0016623	L25-JI0016626	L25-JI0016627
Date Sampled			Jun 23, 2025	Jun 24, 2025	Jun 25, 2025	Jun 26, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)- Trace						
18O2-PFHxS (surr.)	1	%	-	-	-	135
13C8-PFOS (surr.)	1	%	-	-	-	120
PFASs Summations						
Sum (PFHxS + PFOS)*	0.001	ug/L	-	-	-	< 0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.001	ug/L	-	-	-	< 0.001
Sum of PFASs (n=30)*	0.005	ug/L	-	-	-	< 0.005
Sum of US EPA PFAS (PFOS + PFOA)*	0.001	ug/L	-	-	-	< 0.001
Sum of WA DWER PFAS (n=10)*	0.005	ug/L	-	-	-	< 0.005

Client Sample ID			0960_QC208_2 50627	0960_QC210_2 50629	0960_QC212_2 50630	0960_QC214_2 50630
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016629	L25-JI0016631	L25-JI0016633	L25-JI0016635
Date Sampled			Jun 27, 2025	Jun 29, 2025	Jun 30, 2025	Jun 30, 2025
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}	0.05	ug/L	< 0.05	-	< 0.05	-
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	-	< 0.01	-
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	%	^J -41	-	56	-
13C5-PFPeA (surr.)	1	%	56	-	69	-
13C5-PFHxA (surr.)	1	%	53	-	70	-
13C4-PFHpA (surr.)	1	%	53	-	67	-
13C8-PFOA (surr.)	1	%	54	-	69	-
13C5-PFNA (surr.)	1	%	53	-	67	-
13C6-PFDA (surr.)	1	%	55	-	70	-
13C2-PFUnDA (surr.)	1	%	51	-	64	-
13C2-PFDoDA (surr.)	1	%	51	-	67	-
13C2-PFTeDA (surr.)	1	%	^J -39	-	57	-
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	-

Client Sample ID			0960_QC208_2 50627	0960_QC210_2 50629	0960_QC212_2 50630	0960_QC214_2 50630
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016629	L25-JI0016631	L25-JI0016633	L25-JI0016635
Date Sampled			Jun 27, 2025	Jun 29, 2025	Jun 30, 2025	Jun 30, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	-	< 0.05	-
13C8-FOSA (surr.)	1	%	^J 50	-	65	-
D3-N-MeFOSA (surr.)	1	%	61	-	80	-
D5-N-EtFOSA (surr.)	1	%	83	-	103	-
D7-N-MeFOSE (surr.)	1	%	^J 43	-	57	-
D9-N-EtFOSE (surr.)	1	%	^J 44	-	56	-
D5-N-EtFOSAA (surr.)	1	%	^J 48	-	59	-
D3-N-MeFOSAA (surr.)	1	%	^J 46	-	58	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
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	%	55	-	64	-
13C2-6:2 FTSA (surr.)	1	%	54	-	66	-
13C2-8:2 FTSA (surr.)	1	%	^J 50	-	64	-
13C2-10:2 FTSA (surr.)	1	%	^J 49	-	60	-
Perfluoroalkyl sulfonic acids (PFASs)						
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	%	55	-	68	-
18O2-PFHxS (surr.)	1	%	^J 50	-	65	-
13C8-PFOS (surr.)	1	%	50	-	64	-
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	-	< 0.01	-
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	-	< 0.1	-
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	-
Perfluoroalkyl sulfonamido substances- Trace						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005

Client Sample ID			0960_QC208_2 50627	0960_QC210_2 50629	0960_QC212_2 50630	0960_QC214_2 50630
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016629	L25-JI0016631	L25-JI0016633	L25-JI0016635
Date Sampled			Jun 27, 2025	Jun 29, 2025	Jun 30, 2025	Jun 30, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances- Trace						
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
13C8-FOSA (surr.)	1	%	-	50	-	51
D3-N-MeFOSA (surr.)	1	%	-	^J 36	-	54
D5-N-EtFOSA (surr.)	1	%	-	^J 34	-	57
D7-N-MeFOSE (surr.)	1	%	-	^J 26	-	^J 31
D9-N-EtFOSE (surr.)	1	%	-	^J 23	-	^J 32
D5-N-EtFOSAA (surr.)	1	%	-	^J 43	-	^J 45
D3-N-MeFOSAA (surr.)	1	%	-	^J 48	-	^J 47
Perfluoroalkyl carboxylic acids (PFCAs) - Trace						
Perfluorobutanoic acid (PFBA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
Perfluoropentanoic acid (PFPeA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorohexanoic acid (PFHxA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
Perfluorooctanoic acid (PFOA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorononanoic acid (PFNA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorodecanoic acid (PFDA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorotridecanoic acid (PFTeDA) ^{N15}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
13C4-PFBA (surr.)	1	%	-	^J 48	-	^J 26
13C5-PFPeA (surr.)	1	%	-	79	-	77
13C5-PFHxA (surr.)	1	%	-	75	-	79
13C4-PFHpA (surr.)	1	%	-	79	-	78
13C8-PFOA (surr.)	1	%	-	81	-	75
13C5-PFNA (surr.)	1	%	-	74	-	67
13C6-PFDA (surr.)	1	%	-	70	-	64
13C2-PFUnDA (surr.)	1	%	-	^J 46	-	^J 45
13C2-PFDoDA (surr.)	1	%	-	^J 28	-	^J 38
13C2-PFTeDA (surr.)	1	%	-	^J 10	-	^J 30
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) ^{N11}	0.005	ug/L	-	< 0.005	-	< 0.005
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
13C2-4:2 FTSA (surr.)	1	%	-	104	-	78
13C2-6:2 FTSA (surr.)	1	%	-	93	-	77
13C2-8:2 FTSA (surr.)	1	%	-	65	-	57
13C2-10:2 FTSA (surr.)	1	%	-	^J 33	-	^J 36
Perfluoroalkyl sulfonic acids (PFSA)- Ultra trace						
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorononanesulfonic acid (PFNS) ^{*N15}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.0001	ug/L	-	< 0.0001	-	< 0.0001
Perfluoropropanesulfonic acid (PFPrS) ^{*N15}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.001	ug/L	-	< 0.001	-	< 0.001

Client Sample ID			0960_QC208_2 50627	0960_QC210_2 50629	0960_QC212_2 50630	0960_QC214_2 50630
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			L25-JI0016629	L25-JI0016631	L25-JI0016633	L25-JI0016635
Date Sampled			Jun 27, 2025	Jun 29, 2025	Jun 30, 2025	Jun 30, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFASs)- Ultra trace						
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.001	ug/L	-	< 0.001	-	< 0.001
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.001	ug/L	-	< 0.001	-	< 0.001
13C3-PFBS (surr.)	1	%	-	80	-	77
18O2-PFHxS (surr.)	1	%	-	80	-	73
13C8-PFOS (surr.)	1	%	-	63	-	61
PFASs Summations						
Sum (PFHxS + PFOS)*	0.001	ug/L	-	< 0.001	-	< 0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.001	ug/L	-	< 0.001	-	< 0.001
Sum of PFASs (n=30)*	0.005	ug/L	-	< 0.005	-	< 0.005
Sum of US EPA PFAS (PFOS + PFOA)*	0.001	ug/L	-	< 0.001	-	< 0.001
Sum of WA DWER PFAS (n=10)*	0.005	ug/L	-	< 0.005	-	< 0.005

Client Sample ID			0960_QC215_2 50630	0960_QC216_2 50630	0960_QC211_2 50629
Sample Matrix			Water	Water	Water
Eurofins Sample No.			L25-JI0016636	L25-JI0016637	L25-JI0038826
Date Sampled			Jun 30, 2025	Jun 30, 2025	Jun 29, 2025
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	-	< 0.05	-
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.05	ug/L	-	< 0.05	-
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	-	< 0.01	-
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	-	< 0.01	-
13C4-PFBA (surr.)	1	%	-	78	-
13C5-PFPeA (surr.)	1	%	-	90	-
13C5-PFHxA (surr.)	1	%	-	90	-
13C4-PFHpA (surr.)	1	%	-	87	-
13C8-PFOA (surr.)	1	%	-	87	-
13C5-PFNA (surr.)	1	%	-	82	-
13C6-PFDA (surr.)	1	%	-	87	-
13C2-PFUnDA (surr.)	1	%	-	83	-
13C2-PFDoDA (surr.)	1	%	-	82	-
13C2-PFTeDA (surr.)	1	%	-	54	-
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	-	< 0.05	-
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	-	< 0.05	-
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	-	< 0.05	-
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) ^{N11}	0.05	ug/L	-	< 0.05	-

Client Sample ID			0960_QC215_2 50630	0960_QC216_2 50630	0960_QC211_2 50629
Sample Matrix			Water	Water	Water
Eurofins Sample No.			L25-JI0016636	L25-JI0016637	L25-JI0038826
Date Sampled			Jun 30, 2025	Jun 30, 2025	Jun 29, 2025
Test/Reference	LOR	Unit			
Perfluoroalkyl sulfonamido substances					
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	0.05	ug/L	-	< 0.05	-
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	-	< 0.05	-
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	-	< 0.05	-
13C8-FOSA (surr.)	1	%	-	78	-
D3-N-MeFOSA (surr.)	1	%	-	86	-
D5-N-EtFOSA (surr.)	1	%	-	106	-
D7-N-MeFOSE (surr.)	1	%	-	73	-
D9-N-EtFOSE (surr.)	1	%	-	72	-
D5-N-EtFOSAA (surr.)	1	%	-	78	-
D3-N-MeFOSAA (surr.)	1	%	-	78	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	-	< 0.01	-
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) ^{N11}	0.05	ug/L	-	< 0.05	-
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	-	< 0.01	-
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	-	< 0.01	-
13C2-4:2 FTSA (surr.)	1	%	-	90	-
13C2-6:2 FTSA (surr.)	1	%	-	86	-
13C2-8:2 FTSA (surr.)	1	%	-	78	-
13C2-10:2 FTSA (surr.)	1	%	-	78	-
Perfluoroalkyl sulfonic acids (PFASs)					
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorononanesulfonic acid (PFNS) ^{*N15}	0.01	ug/L	-	< 0.01	-
Perfluoropropanesulfonic acid (PFPrS) ^{*N15}	0.01	ug/L	-	< 0.01	-
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	-	< 0.01	-
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	-	< 0.01	-
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	-	< 0.01	-
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	-	< 0.01	-
13C3-PFBS (surr.)	1	%	-	86	-
18O2-PFHxS (surr.)	1	%	-	78	-
13C8-PFOS (surr.)	1	%	-	78	-
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	-	< 0.01	-
Sum of PFASs (n=30)*	0.1	ug/L	-	< 0.1	-
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	< 0.01	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	< 0.01	-
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	< 0.05	-
Perfluoroalkyl sulfonamido substances- Trace					
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005

Client Sample ID			0960_QC215_2 50630	0960_QC216_2 50630	0960_QC211_2 50629
Sample Matrix			Water	Water	Water
Eurofins Sample No.			L25-JI0016636	L25-JI0016637	L25-JI0038826
Date Sampled			Jun 30, 2025	Jun 30, 2025	Jun 29, 2025
Test/Reference	LOR	Unit			
Perfluoroalkyl sulfonamido substances- Trace					
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
13C8-FOSA (surr.)	1	%	^J 31	-	91
D3-N-MeFOSA (surr.)	1	%	^J 13	-	104
D5-N-EtFOSA (surr.)	1	%	^J 8.0	-	110
D7-N-MeFOSE (surr.)	1	%	^J 4.0	-	85
D9-N-EtFOSE (surr.)	1	%	^J 3.0	-	86
D5-N-EtFOSAA (surr.)	1	%	^J 16	-	87
D3-N-MeFOSAA (surr.)	1	%	^J 17	-	80
Perfluoroalkyl carboxylic acids (PFCAs) - Trace					
Perfluorobutanoic acid (PFBA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
Perfluoropentanoic acid (PFPeA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorohexanoic acid (PFHxA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
Perfluorooctanoic acid (PFOA) ^{N11}	0.001	ug/L	0.002	-	< 0.001
Perfluorononanoic acid (PFNA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorodecanoic acid (PFDA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorotridecanoic acid (PFTTrDA) ^{N15}	0.001	ug/L	< 0.001	-	< 0.001
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
13C4-PFBA (surr.)	1	%	^J 37	-	^J 21
13C5-PFPeA (surr.)	1	%	83	-	66
13C5-PFHxA (surr.)	1	%	78	-	88
13C4-PFHpA (surr.)	1	%	64	-	93
13C8-PFOA (surr.)	1	%	59	-	98
13C5-PFNA (surr.)	1	%	^J 43	-	97
13C6-PFDA (surr.)	1	%	^J 27	-	97
13C2-PFUnDA (surr.)	1	%	^J 11	-	93
13C2-PFDoDA (surr.)	1	%	^J 4.0	-	93
13C2-PFTeDA (surr.)	1	%	^J 1.0	-	64
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) ^{N11}	0.005	ug/L	< 0.005	-	< 0.005
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
13C2-4:2 FTSA (surr.)	1	%	77	-	82
13C2-6:2 FTSA (surr.)	1	%	74	-	105
13C2-8:2 FTSA (surr.)	1	%	^J 28	-	92
13C2-10:2 FTSA (surr.)	1	%	^J 4.0	-	95

Client Sample ID			0960_QC215_2 50630	0960_QC216_2 50630	0960_QC211_2 50629
Sample Matrix			Water	Water	Water
Eurofins Sample No.			L25-JI0016636	L25-JI0016637	L25-JI0038826
Date Sampled			Jun 30, 2025	Jun 30, 2025	Jun 29, 2025
Test/Reference	LOR	Unit			
Perfluoroalkyl sulfonic acids (PFASs)- Ultra trace					
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorononanesulfonic acid (PFNS) ^{*N15}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.0001	ug/L	0.0011	-	< 0.0001
Perfluoropropanesulfonic acid (PFPrS) ^{*N15}	0.001	ug/L	< 0.001	-	< 0.001
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.001	ug/L	< 0.001	-	< 0.001
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.001	ug/L	< 0.001	-	< 0.001
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.001	ug/L	< 0.001	-	< 0.001
13C3-PFBS (surr.)	1	%	82	-	106
18O2-PFHxS (surr.)	1	%	73	-	109
13C8-PFOS (surr.)	1	%	^J 36	-	97
PFASs Summations					
Sum (PFHxS + PFOS)*	0.001	ug/L	0.0011	-	< 0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.001	ug/L	0.0031	-	< 0.001
Sum of PFASs (n=30)*	0.005	ug/L	< 0.005	-	< 0.005
Sum of US EPA PFAS (PFOS + PFOA)*	0.001	ug/L	0.0031	-	< 0.001
Sum of WA DWER PFAS (n=10)*	0.005	ug/L	< 0.005	-	< 0.005

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
Perfluoroalkyl carboxylic acids (PFCAs) - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
Perfluoroalkyl sulfonamido substances - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
Perfluoroalkyl sulfonic acids (PFSAs) - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
PFASs Summations - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	
Perfluoroalkyl sulfonamido substances- Trace - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 17, 2025	28 Days
Perfluoroalkyl carboxylic acids (PFCAs) - Trace - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 17, 2025	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 17, 2025	28 Days
Perfluoroalkyl sulfonic acids (PFSAs)- Ultra trace - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS (ultra trace)	Welshpool	Jul 17, 2025	28 Days
Perfluoroalkyl sulfonic acids (PFSAs)- Trace - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS (low level)	Welshpool	Jul 08, 2025	28 Days



web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne
6 Monterey Road
Dandenong South
VIC 3175
+61 3 8564 5000
NATA# 1261
Site# 1254

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
+61 3 8564 5000
NATA# 1261
Site# 25403

Sydney
179 Magowar Road
Girraween
NSW 2145
+61 2 9900 8400
NATA# 1261
Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
+61 2 6113 8091
NATA# 1261
Site# 25466

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
+61 7 3902 4600
NATA# 1261
Site# 20794 & 2780

Newcastle
1/2 Frost Drive
Mayfield West
NSW 2304
+61 2 4968 8448
NATA# 1261
Site# 25079

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose
Auckland 1061
+64 9 526 4551
IANZ# 1327

Auckland (Focus)
Unit C1/4 Pacific Rise
Mount Wellington
Auckland 1061
+64 9 525 0568
IANZ# 1308

Christchurch
43 Detroit Drive
Rolleston
Christchurch 7675
+64 3 343 5201
IANZ# 1290

Tauranga
1277 Cameron Road
Gate Pa
Tauranga 3112
+64 9 525 0568
IANZ# 1402

Company Name: GHD Pty Ltd WA
Address: 999 Hay Street Perth
Perth
WA 6004

Project Name:
Project ID: WA_0960_PFASOMP_25

Order No.: 12641234
Report #: 1241100
Phone: 08 6222 8222
Fax: 08 9429 6555

Received: Jul 4, 2025 4:54 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: - ALL GHD lab reports

Eurofins Analytical Services Manager : [REDACTED]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace
Perth Laboratory - NATA # 2377 Site # 2370 & 2554						X	X	X	X
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	0960_QC201_250623	Jun 23, 2025		Water	L25-JI0016622		X		
2	0960_QC202_250625	Jun 24, 2025		Water	L25-JI0016623		X		
3	0960_QC203_250625	Jun 24, 2025		Soil	L25-JI0016624	X	X		
4	0960_QC204_250625	Jun 25, 2025		Soil	L25-JI0016625	X	X		
5	0960_QC205_250625	Jun 25, 2025		Water	L25-JI0016626		X		
6	0960_QC206_250626	Jun 26, 2025		Water	L25-JI0016627			X	
7	0960_QC207_250626	Jun 26, 2025		Soil	L25-JI0016628	X	X		
8	0960_QC208_250627	Jun 27, 2025		Water	L25-JI0016629		X		
9	0960_QC209_	Jun 28, 2025		Soil	L25-JI0016630	X	X		



web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466
---	--	--	--

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
--	--

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402
--	--	---	--

Company Name: GHD Pty Ltd WA
Address: 999 Hay Street Perth
Perth
WA 6004

Project Name:
Project ID: WA_0960_PFASOMP_25

Order No.: 12641234
Report #: 1241100
Phone: 08 6222 8222
Fax: 08 9429 6555

Received: Jul 4, 2025 4:54 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: - ALL GHD lab reports

Eurofins Analytical Services Manager : XXXXXXXXXX

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace
Perth Laboratory - NATA # 2377 Site # 2370 & 2554						X	X	X	X
External Laboratory									
	250628								
10	0960_QC210_250629	Jun 29, 2025		Water	L25-JI0016631				X
11	0960_QC212_250630	Jun 30, 2025		Water	L25-JI0016633		X		
12	0960_QC213_250630	Jun 30, 2025		Soil	L25-JI0016634	X	X		
13	0960_QC214_250630	Jun 30, 2025		Water	L25-JI0016635				X
14	0960_QC215_250630	Jun 30, 2025		Water	L25-JI0016636				X
15	0960_QC216_250630	Jun 30, 2025		Water	L25-JI0016637		X		
16	0960_QC211_250629	Jun 29, 2025		Water	L25-JI0038826				X
Test Counts						5	11	1	4

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 (<i>bis</i> -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	< 0.05			0.05	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 (PFTTrDA)	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							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)							
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	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSA)							
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							
Perfluoroalkyl sulfonic acids (PFSA)- Trace							
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.001			0.001	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.005			0.005	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.005			0.005	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.005			0.005	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.005			0.005	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.005			0.005	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.005			0.005	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.005			0.005	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.005			0.005	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.001			0.001	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.001			0.001	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.005			0.005	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.001			0.001	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.001			0.001	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.001			0.001	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.001			0.001	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.001			0.001	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.001			0.001	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.001			0.001	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.001			0.001	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.005			0.005	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.001			0.001	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.001			0.001	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSA)- Trace							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.001			0.001	Pass	
Perfluorononanesulfonic acid (PFNS)*	ug/L	< 0.001			0.001	Pass	
Perfluoropropanesulfonic acid (PFPrS)*	ug/L	< 0.001			0.001	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.001			0.001	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.001			0.001	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.001			0.001	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.001			0.001	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSA)- Ultra trace							
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.0001			0.0001	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	82			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	76			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	92			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	100			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	116			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	114			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	120			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	100			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	100			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	92			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	116			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	112			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	108			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	104			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	100			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	114			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	114			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)-							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	116			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	108			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFASs)							
Perfluorobutanesulfonic acid (PFBS)	%	114			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*	%	108			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*	%	100			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	110			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	84			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	114			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	80			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	108			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorotridecanoic acid (PFTrDA)	%	110			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	96			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	90			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	110			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	86			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	92			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFASs)- Trace							
Perfluorobutanesulfonic acid (PFBS)	%	86			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*	%	94			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*	%	80			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	88			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	90			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	92			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	80			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorotridecanoic acid (PFTrDA)	%	84			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	98			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	96			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	96			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFASs)- Trace							
Perfluorobutanesulfonic acid (PFBS)	%	84			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*	%	80			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*	%	82			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	86			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	88			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	88			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorodecanesulfonic acid (PFDS)	%	66			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSA)s- Ultra trace							
Perfluorooctanesulfonic acid (PFOS)	%	92			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	112			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	108			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	104			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	100			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	114			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCA)s - Trace							
Perfluorobutanoic acid (PFBA)	%	110			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	98			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	106			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	112			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	116			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	114			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	120			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	92			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	100			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	100			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	116			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)s- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	116			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	108			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSA)s- Trace							
Perfluorobutanesulfonic acid (PFBS)	%	114			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*	%	108			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*	%	100			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	110			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	114			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	114			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	108			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSA)s- Ultra trace							
Perfluorooctanesulfonic acid (PFOS)	%	116			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCA)s - Trace							
Perfluorotridecanoic acid (PFTrDA)	%	102			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	130			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	120			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)s- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	128			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	132			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	116			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	118			50-150	Pass	
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)s- Trace									
Perfluorobutanesulfonic acid (PFBS)			%	112			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*			%	106			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*			%	102			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)			%	108			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)			%	112			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)			%	116			50-150	Pass	
Perfluorododecanesulfonic acid (PFDS)			%	106			50-150	Pass	
LCS - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)s- Ultra trace									
Perfluorooctanesulfonic acid (PFOS)			%	112			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCA)s				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	L25-JI0023969	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	L25-JI0023969	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	L25-JI0023969	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	L25-JI0023969	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	L25-JI0016775	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)*	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)*	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	L25-JI0023969	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	L25-JI0023969	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	L25-JI0016775	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)- Trace				Result 1	Result 2	RPD		
Perfluorooctanesulfonic acid (PFOS)	L25-JI0023977	NCP	ug/L	0.044	0.056	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances- Trace				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCA) - Trace				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorononanoic acid (PFNA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass

Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs) - Trace				Result 1	Result 2	RPD		
Perfluoroundecanoic acid (PFUnDA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	L25-JI0010126	NCP	ug/L	< 0.005	< 0.005	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)- Trace				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)*	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)*	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	L25-JI0010126	NCP	ug/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)- Ultra trace				Result 1	Result 2	RPD		
Perfluorooctanesulfonic acid (PFOS)	L25-JI0010126	NCP	ug/L	0.0001	0.0001	<1	30%	Pass

Comments

Report 1241100-W-V2 (amendment to report 1241100-W) has been issued with JI0038826 added to the report as per client request.

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
J-	If the percent recoveries were less than the lower control limit, qualify detects for the analyte in associated samples as estimated with a negative bias J-.
J+	If the percent recoveries were greater than the upper control limit, qualify detects for the analyte in associated samples as estimated with a positive bias J+.
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:

	Analytical Services Manager
	Senior Analyst-PFAS
	Senior Analyst-PFAS



General Manager

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

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.

GHD Pty Ltd WA
999 Hay Street Perth
Perth
WA 6004



NATA Accredited
Accreditation Number 2377
Site Number 2370 & 2554

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:



Report **1241100-S**
Project name [WA_0960_PFASOMP_25](#)
Received Date Jul 04, 2025

Client Sample ID			0960_QC203_2 50625	0960_QC204_2 50625	0960_QC207_2 50626	0960_QC209_2 50628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			L25-JI0016624	L25-JI0016625	L25-JI0016628	L25-JI0016630
Date Sampled			Jun 24, 2025	Jun 25, 2025	Jun 26, 2025	Jun 28, 2025
Test/Reference	LOR	Unit				
% Moisture	1	%	22	23	40	14
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 (PFTeDA) ^{N15}	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	88	85	76	87
13C5-PFPeA (surr.)	1	%	92	92	86	91
13C5-PFHxA (surr.)	1	%	96	92	88	95
13C4-PFHpA (surr.)	1	%	100	88	83	91
13C8-PFOA (surr.)	1	%	97	92	85	88
13C5-PFNA (surr.)	1	%	93	94	86	91
13C6-PFDA (surr.)	1	%	96	93	84	90
13C2-PFUnDA (surr.)	1	%	99	90	87	97
13C2-PFDoDA (surr.)	1	%	95	92	87	92
13C2-PFTeDA (surr.)	1	%	107	98	97	103
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	%	94	91	87	87

Client Sample ID			0960_QC203_2 50625	0960_QC204_2 50625	0960_QC207_2 50626	0960_QC209_2 50628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			L25-JI0016624	L25-JI0016625	L25-JI0016628	L25-JI0016630
Date Sampled			Jun 24, 2025	Jun 25, 2025	Jun 26, 2025	Jun 28, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D3-N-MeFOSA (surr.)	1	%	130	136	124	132
D5-N-EtFOSA (surr.)	1	%	^J -156	^J -161	149	^J -150
D7-N-MeFOSE (surr.)	1	%	91	94	90	92
D9-N-EtFOSE (surr.)	1	%	96	97	93	89
D5-N-EtFOSAA (surr.)	1	%	90	87	82	94
D3-N-MeFOSAA (surr.)	1	%	90	88	87	91
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)						
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	%	98	91	85	82
13C2-6:2 FTSA (surr.)	1	%	97	92	87	91
13C2-8:2 FTSA (surr.)	1	%	97	93	101	99
13C2-10:2 FTSA (surr.)	1	%	99	97	92	98
Perfluoroalkyl sulfonic acids (PFSA)						
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	%	95	89	86	95
18O2-PFHxS (surr.)	1	%	95	89	84	89
13C8-PFOS (surr.)	1	%	94	90	89	93
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50
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

Client Sample ID			0960_QC213_2 50630
Sample Matrix			Soil
Eurofins Sample No.			L25-JI0016634
Date Sampled			Jun 30, 2025
Test/Reference	LOR	Unit	
% Moisture	1	%	20

Client Sample ID			0960_QC213_2
Sample Matrix			Soil
Eurofins Sample No.			L25-JI0016634
Date Sampled			Jun 30, 2025
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA) ^{N11}	5	ug/kg	< 5
Perfluoropentanoic acid (PFPeA) ^{N11}	5	ug/kg	< 5
Perfluorohexanoic acid (PFHxA) ^{N11}	5	ug/kg	< 5
Perfluoroheptanoic acid (PFHpA) ^{N11}	5	ug/kg	< 5
Perfluorooctanoic acid (PFOA) ^{N11}	5	ug/kg	< 5
Perfluorononanoic acid (PFNA) ^{N11}	5	ug/kg	< 5
Perfluorodecanoic acid (PFDA) ^{N11}	5	ug/kg	< 5
Perfluoroundecanoic acid (PFUnDA) ^{N11}	5	ug/kg	< 5
Perfluorododecanoic acid (PFDoDA) ^{N11}	5	ug/kg	< 5
Perfluorotridecanoic acid (PFTrDA) ^{N15}	5	ug/kg	< 5
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	5	ug/kg	< 5
13C4-PFBA (surr.)	1	%	78
13C5-PFPeA (surr.)	1	%	86
13C5-PFHxA (surr.)	1	%	89
13C4-PFHpA (surr.)	1	%	86
13C8-PFOA (surr.)	1	%	86
13C5-PFNA (surr.)	1	%	86
13C6-PFDA (surr.)	1	%	86
13C2-PFUnDA (surr.)	1	%	85
13C2-PFDoDA (surr.)	1	%	86
13C2-PFTeDA (surr.)	1	%	101
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA) ^{N11}	5	ug/kg	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	5	ug/kg	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	5	ug/kg	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) ^{N11}	5	ug/kg	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	5	ug/kg	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	10	ug/kg	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	10	ug/kg	< 10
13C8-FOSA (surr.)	1	%	86
D3-N-MeFOSA (surr.)	1	%	123
D5-N-EtFOSA (surr.)	1	%	149
D7-N-MeFOSE (surr.)	1	%	92
D9-N-EtFOSE (surr.)	1	%	97
D5-N-EtFOSAA (surr.)	1	%	88
D3-N-MeFOSAA (surr.)	1	%	88
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	5	ug/kg	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) ^{N11}	10	ug/kg	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	5	ug/kg	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	5	ug/kg	< 5
13C2-4:2 FTSA (surr.)	1	%	90
13C2-6:2 FTSA (surr.)	1	%	84

Client Sample ID			0960_QC213_2
Sample Matrix			Soil
Eurofins Sample No.			L25-JI0016634
Date Sampled			Jun 30, 2025
Test/Reference	LOR	Unit	
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)			
13C2-8:2 FTSA (surr.)	1	%	84
13C2-10:2 FTSA (surr.)	1	%	90
Perfluoroalkyl sulfonic acids (PFASs)			
Perfluorobutanesulfonic acid (PFBS) ^{N11}	5	ug/kg	< 5
Perfluorononanesulfonic acid (PFNS) ^{*N15}	5	ug/kg	< 5
Perfluoropropanesulfonic acid (PFPrS) ^{*N15}	5	ug/kg	< 5
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	5	ug/kg	< 5
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	5	ug/kg	< 5
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	5	ug/kg	< 5
Perfluorooctanesulfonic acid (PFOS) ^{N11}	5	ug/kg	< 5
Perfluorodecanesulfonic acid (PFDS) ^{N15}	5	ug/kg	< 5
13C3-PFBS (surr.)	1	%	88
18O2-PFHxS (surr.)	1	%	87
13C8-PFOS (surr.)	1	%	88
PFASs Summations			
Sum (PFHxS + PFOS)*	5	ug/kg	< 5
Sum of PFASs (n=30)*	50	ug/kg	< 50
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10

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 - Method: ARL135 Moisture in Solids	Welshpool	Jul 07, 2025	14 Days
Perfluoroalkyl carboxylic acids (PFCAs) - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
Perfluoroalkyl sulfonamido substances - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs) - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
Perfluoroalkyl sulfonic acids (PFSA)s - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	28 Days
PFASs Summations - Method: Method ARL0510_ARL0511 PFAS in aqueous & solid samples by LC-MS/MS	Welshpool	Jul 08, 2025	



web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne
6 Monterey Road
Dandenong South
VIC 3175
+61 3 8564 5000
NATA# 1261
Site# 1254

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
+61 3 8564 5000
NATA# 1261
Site# 25403

Sydney
179 Magowar Road
Girraween
NSW 2145
+61 2 9900 8400
NATA# 1261
Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
+61 2 6113 8091
NATA# 1261
Site# 25466

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
+61 7 3902 4600
NATA# 1261
Site# 20794 & 2780

Newcastle
1/2 Frost Drive
Mayfield West
NSW 2304
+61 2 4968 8448
NATA# 1261
Site# 25079

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose
Auckland 1061
+64 9 526 4551
IANZ# 1327

Auckland (Focus)
Unit C1/4 Pacific Rise
Mount Wellington
Auckland 1061
+64 9 525 0568
IANZ# 1308

Christchurch
43 Detroit Drive
Rolleston
Christchurch 7675
+64 3 343 5201
IANZ# 1290

Tauranga
1277 Cameron Road
Gate Pa
Tauranga 3112
+64 9 525 0568
IANZ# 1402

Company Name: GHD Pty Ltd WA
Address: 999 Hay Street Perth
Perth
WA 6004
Project Name: WA_0960_PFASOMP_25

Order No.:
Report #: 1241100
Phone: 08 6222 8222
Fax: 08 9429 6555

Received: Jul 4, 2025 4:54 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: - ALL GHD lab reports

Eurofins Analytical Services Manager : [REDACTED]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs) - Trace	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace	Per- and Polyfluoroalkyl Substances (PFASs)
Perth Laboratory - NATA # 2377 Site # 2370 & 2554						X	X	X	X
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	0960_QC201_250623	Jun 23, 2025		Water	L25-JI0016622		X		
2	0960_QC202_250625	Jun 24, 2025		Water	L25-JI0016623		X		
3	0960_QC203_250625	Jun 24, 2025		Soil	L25-JI0016624	X	X		
4	0960_QC204_250625	Jun 25, 2025		Soil	L25-JI0016625	X	X		
5	0960_QC205_250625	Jun 25, 2025		Water	L25-JI0016626		X		
6	0960_QC206_250626	Jun 26, 2025		Water	L25-JI0016627			X	
7	0960_QC207_250626	Jun 26, 2025		Soil	L25-JI0016628	X	X		
8	0960_QC208_250627	Jun 27, 2025		Water	L25-JI0016629		X		
9	0960_QC209_250628	Jun 28, 2025		Soil	L25-JI0016630	X	X		



web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne
6 Monterey Road
Dandenong South
VIC 3175
+61 3 8564 5000
NATA# 1261
Site# 1254

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
+61 3 8564 5000
NATA# 1261
Site# 25403

Sydney
179 Magowar Road
Girraween
NSW 2145
+61 2 9900 8400
NATA# 1261
Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
+61 2 6113 8091
NATA# 1261
Site# 25466

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
+61 7 3902 4600
NATA# 1261
Site# 20794 & 2780

Newcastle
1/2 Frost Drive
Mayfield West
NSW 2304
+61 2 4968 8448
NATA# 1261
Site# 25079

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose
Auckland 1061
+64 9 526 4551
IANZ# 1327

Auckland (Focus)
Unit C1/4 Pacific Rise
Mount Wellington
Auckland 1061
+64 9 525 0568
IANZ# 1308

Christchurch
43 Detroit Drive
Rolleston
Christchurch 7675
+64 3 343 5201
IANZ# 1290

Tauranga
1277 Cameron Road
Gate Pa
Tauranga 3112
+64 9 525 0568
IANZ# 1402

Company Name: GHD Pty Ltd WA
Address: 999 Hay Street Perth
Perth
WA 6004
Project Name: WA_0960_PFASOMP_25

Order No.:
Report #: 1241100
Phone: 08 6222 8222
Fax: 08 9429 6555

Received: Jul 4, 2025 4:54 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: - ALL GHD lab reports

Eurofins Analytical Services Manager : [REDACTED]

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs) - Trace	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace	Per- and Polyfluoroalkyl Substances (PFASs)
Perth Laboratory - NATA # 2377 Site # 2370 & 2554						X	X	X	X
External Laboratory									
10	0960_QC210_250629	Jun 29, 2025		Water	L25-JI0016631				X
11	0960_QC212_250630	Jun 30, 2025		Water	L25-JI0016633		X		
12	0960_QC213_250630	Jun 30, 2025		Soil	L25-JI0016634	X	X		
13	0960_QC214_250630	Jun 30, 2025		Water	L25-JI0016635				X
14	0960_QC215_250630	Jun 30, 2025		Water	L25-JI0016636				X
15	0960_QC216_250630	Jun 30, 2025		Water	L25-JI0016637		X		
Test Counts						5	11	1	3

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 (<i>bis</i> -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 (PFTriDA)	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							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)							
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 sulfonic acids (PFSA)							
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							
PFASs Summations							
Sum of PFASs (n=30)*	ug/kg	-			50	N/A	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	94			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	84			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	104			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	102			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	100			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	105			50-150	Pass	

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorododecanoic acid (PFDoDA)				%	98			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)				%	98			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)				%	97			50-150	Pass	
LCS - % Recovery										
Perfluoroalkyl sulfonamido substances										
Perfluorooctane sulfonamide (FOSA)				%	92			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)				%	97			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)				%	98			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)				%	96			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)				%	98			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)				%	102			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)				%	104			50-150	Pass	
LCS - % Recovery										
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)										
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)				%	96			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)				%	102			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)				%	99			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)				%	104			50-150	Pass	
LCS - % Recovery										
Perfluoroalkyl sulfonic acids (PFSAs)										
Perfluorobutanesulfonic acid (PFBS)				%	99			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*				%	103			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*				%	87			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)				%	93			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)				%	95			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)				%	93			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)				%	93			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)				%	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)	L25-Jn0054417	NCP	%	91			50-150	Pass		
Perfluoropentanoic acid (PFPeA)	L25-Jn0054417	NCP	%	84			50-150	Pass		
Perfluorohexanoic acid (PFHxA)	L25-Jn0054417	NCP	%	99			50-150	Pass		
Perfluoroheptanoic acid (PFHpA)	L25-Jn0054417	NCP	%	93			50-150	Pass		
Perfluorooctanoic acid (PFOA)	L25-Jn0054417	NCP	%	96			50-150	Pass		
Perfluorononanoic acid (PFNA)	L25-Jn0054417	NCP	%	94			50-150	Pass		
Perfluorodecanoic acid (PFDA)	L25-Jn0054417	NCP	%	102			50-150	Pass		
Perfluoroundecanoic acid (PFUnDA)	L25-Jn0054417	NCP	%	98			50-150	Pass		
Perfluorododecanoic acid (PFDoDA)	L25-Jn0054417	NCP	%	96			50-150	Pass		
Perfluorotridecanoic acid (PFTrDA)	L25-Jn0054417	NCP	%	87			50-150	Pass		
Perfluorotetradecanoic acid (PFTeDA)	L25-Jn0054417	NCP	%	99			50-150	Pass		
Spike - % Recovery										
Perfluoroalkyl sulfonamido substances					Result 1					
Perfluorooctane sulfonamide (FOSA)	L25-Jn0054417	NCP	%	95			50-150	Pass		
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	L25-Jn0054417	NCP	%	104			50-150	Pass		
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	L25-Jn0054417	NCP	%	98			50-150	Pass		
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	L25-Jn0054417	NCP	%	94			50-150	Pass		

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	L25-Jn0054417	NCP	%	94			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	L25-Jn0054417	NCP	%	95			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	L25-Jn0054417	NCP	%	102			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	L25-Jn0054417	NCP	%	97			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	L25-Jn0054417	NCP	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	L25-Jn0054417	NCP	%	98			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	L25-Jn0054417	NCP	%	91			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	L25-Jn0054417	NCP	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)*	L25-Jn0054417	NCP	%	91			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)*	L25-Jn0054417	NCP	%	86			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	L25-Jn0054417	NCP	%	92			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	L25-Jn0054417	NCP	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	L25-Jn0054417	NCP	%	101			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	L25-Jn0054417	NCP	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	L25-Jn0054417	NCP	%	92			50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	L25-Jl0016624	CP	%	22	22	2.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCA)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	L25-Jn0054358	NCP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	L25-Jn0054358	NCP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	L25-Jn0054358	NCP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)*	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)*	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	L25-Jn0054358	NCP	ug/kg	< 5	< 5	<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
J-	If the percent recoveries were less than the lower control limit, qualify detects for the analyte in associated samples as estimated with a negative bias J-.
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-Sample Properties
	Senior Analyst-PFAS




General Manager

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

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.

Eurofins ARL Pty Ltd Eurofins Environment Testing Australia Pty Ltd

ABN: 91 05 0159 898

ABN: 50 005 085 521

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Perth	Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle	Auckland	Auckland (Focus)	Christchurch	Tauranga
46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554	6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	1/21 Smallwood Place Murarrie QLD 4172 +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079	35 O'Rourke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402

Sample Receipt Advice

Company name: GHD Pty Ltd WA
Contact name: - ALL GHD lab reports
Project name: WA_0960_PFASOMP_25
Project ID: Not provided
Turnaround time: 5 Day
Date/Time received: Jul 4, 2025 4:54 PM
Eurofins reference: 1241100

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 : 21.7 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

Sample 0960_QC211_250629 not received. Please advise.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

██████████ on phone : or by email: ██████████@eurofinsanz.com

Results will be delivered electronically via email to - ALL GHD lab reports - ghd.labreports@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd WA email address.



web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466
---	--	--	--

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
--	--

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402
--	--	---	--

Company Name: GHD Pty Ltd WA
Address: 999 Hay Street Perth
Perth
WA 6004
Project Name: WA_0960_PFASOMP_25

Order No.:
Report #: 1241100
Phone: 08 6222 8222
Fax: 08 9429 6555

Received: Jul 4, 2025 4:54 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: - ALL GHD lab reports

Eurofins Analytical Services Manager : XXXXXXXXXX

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace
Perth Laboratory - NATA # 2377 Site # 2370 & 2554						X	X	X	X
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	0960_QC201_250623	Jun 23, 2025		Water	L25-JI0016622		X		
2	0960_QC202_250625	Jun 24, 2025		Water	L25-JI0016623		X		
3	0960_QC203_250625	Jun 24, 2025		Soil	L25-JI0016624	X	X		
4	0960_QC204_250625	Jun 25, 2025		Soil	L25-JI0016625	X	X		
5	0960_QC205_250625	Jun 25, 2025		Water	L25-JI0016626		X		
6	0960_QC206_250626	Jun 26, 2025		Water	L25-JI0016627			X	
7	0960_QC207_250626	Jun 26, 2025		Soil	L25-JI0016628	X	X		
8	0960_QC208_250627	Jun 27, 2025		Water	L25-JI0016629		X		
9	0960_QC209_250628	Jun 28, 2025		Soil	L25-JI0016630	X	X		



web: www.eurofins.com.au
email: EnviroSales@eurofinsanz.com

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466
---	--	--	--

Brisbane 1/21 Smallwood Place Murarrie QLD 4172 +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
--	--

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402
--	--	---	--

Company Name: GHD Pty Ltd WA
Address: 999 Hay Street Perth
Perth
WA 6004
Project Name: WA_0960_PFASOMP_25

Order No.:
Report #: 1241100
Phone: 08 6222 8222
Fax: 08 9429 6555

Received: Jul 4, 2025 4:54 PM
Due: Jul 11, 2025
Priority: 5 Day
Contact Name: - ALL GHD lab reports

Eurofins Analytical Services Manager : XXXXXXXXXX

Sample Detail						Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs) - Trace	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace	Per- and Polyfluoroalkyl Substances (PFASs)
Perth Laboratory - NATA # 2377 Site # 2370 & 2554						X	X	X	X
External Laboratory									
10	0960_QC210_250629	Jun 29, 2025		Water	L25-JI0016631				X
11	0960_QC212_250630	Jun 30, 2025		Water	L25-JI0016633		X		
12	0960_QC213_250630	Jun 30, 2025		Soil	L25-JI0016634	X	X		
13	0960_QC214_250630	Jun 30, 2025		Water	L25-JI0016635				X
14	0960_QC215_250630	Jun 30, 2025		Water	L25-JI0016636				X
15	0960_QC216_250630	Jun 30, 2025		Water	L25-JI0016637		X		
Test Counts						5	11	1	3

**CHAIN OF CUSTODY RECORD
AND ANALYSIS REQUEST**



GHD
Level 10, 999 Hay Street
Perth WA 6000

PO Box 3106
Perth WA 6832

Reception Ph: 08 6222 8222

Page 1 of 1

Project ID (as per ESDat set up; no spaces)
WA_0960_PFASOMP_25

PO Number (to be invoiced)
12641234

Laboratory: Eurofins | ARL

Address: 46-48 Banksia Rd, Welshpool WA 6106

Laboratory Contact:

Laboratory Quote No.
240523GHDW

Turnaround Time
Standard

Project Manager (Invoice) & GHD accounts
AccountsPayableAU@ghd.com

Email Address (Results)
GHD.LabReports@ghd.com
DCARM-WA_LABREPORTS@GHD.COM
DERP.LABREPORTS@ESDAT.COM.AU

GHD Sample ID	Lab Sample ID	Date	Time	Sample Matrix	Type	Container	Preservative	No	PFAS Full Suite standard (30 compounds)	PFAS Full Suite trace (30 compounds)	PFAS Full Suite (30 compounds) - soil	PFAS Full Suite Ultra Trace Level PFOS (30 compounds)	Analyses	Remarks
0960_QC201_250623		23/06/2025		W	B	UP	2	X						
0960_QC202_250625		24/06/2025		W	B	UP	2	X						
0960_QC203_250625		24/06/2025		S	S	UP	1			X				
0960_QC204_250625		25/06/2025		S	S	UP	1			X				
0960_QC205_250625		25/06/2025		W	B	UP	2	X						
0960_QC206_250626		26/06/2025		W	B	UP	2		X					
0960_QC207_250626		26/06/2025		S	S	UP	1			X				
0960_QC208_250627		27/06/2025		W	B	UP	2	X						
0960_QC209_250628		28/06/2025		S	S	UP	1			X				
0960_QC210_250629		29/06/2025		W	B	UP	2				X			
0960_QC211_250629		29/06/2025		W	B	UP	2	X						
0960_QC212_250630		30/06/2025		W	B	UP	2	X						
0960_QC213_250630		30/06/2025		S	S	UP	1			X				
0960_QC214_250630		30/06/2025		W	B	UP	2				X			
0960_QC215_250630		30/06/2025		W	B	UP	2				X			
0960_QC216_250630		30/06/2025		W	B	UP	2	X						

Sampled by: [REDACTED]

Date/Time: 23 to 30 June

Relinquished by: [REDACTED]

Date/Time: 04/07/25 16:54

Date/Time: 4/07/2025

Received by:

Date/Time:

Relinquished by:

Courier / Drop Off

Date/Time:

Attempt to Call: Y / N / NA



Temp
Signa

#1241100

Appendix F

Field notes

Purging and Sampling Record

Well ID: 0960 MW104

Job Information		Sampling Information		Monitoring Well Information			
Client: Department of Defence		Purge Method:	No purge	SWL: 2.310	m bTOC	Time SWL Measured:	08:40 AM
Project: Defence PFASIM OMP Learning		Sample Method:	Hydrasleeve	Well Depth: 6.084	m bTOC	Logic Check:	
Proj. No.: 12641234		Sample Depth:	5.5 m bTOC	NAPL Check: Absent		Well Cap Secure?	Yes
Site: 0960		WQuality Meter Type:	YSI pro quatro	NAPL Depth: -	m bTOC	Gatic or Stick Up?	Stick Up
Sampler: ████████		Flow Cell Used?	No	Screened Interval From: 1	to 6.5 m bgl		
Date: 24/06/2025		WLevel Meter Type:	Interface Probe	Well Diameter: 50	mm	Stick Up:	0.6 m
Round: Post summer 2025		Field Filtered?	No				

[illegible]

Field QA Checks: Air bubbles in vials or violent reactions? No Decontamination as per GHD procedure? Yes Was sampling equipment pre-cleaned? Yes COC updated? Yes						Purge Volumes Casing Int. Dia (mm) 50 100 150 Vol (L/m of casing) 2.0 7.9 17.7			
--	--	--	--	--	--	---	--	--	--

Comment:						
Sample Summary	Samples collected?	Yes	Duplicate collected?	Yes	Duplicate 1 ID:	0960_QC102_250624
	#Primary sample containers	2	Duplicate analysis:	PFAS	Duplicate 2 ID:	0960_QC202_250624

Purging and Sampling Record

Well ID: 0960 MW112

Job Information		Sampling Information		Monitoring Well Information				
Client:	Department of Defence	Purge Method:	No purge	SWL:	4.238	m bTOC	Time SWL Measured:	03:50 PM
Project:	Defence PFASIM OMP Learning	Sample Method:	Hydrasleeve	Well Depth:	6.980	m bTOC	Logic Check:	Yes
Proj. No.:	12641234	Sample Depth:	5 m bTOC	NAPL Check:	Absent		Well Cap Secure?	Yes
Site:	0960	WQuality Meter Type:	YSI pro quatro	NAPL Depth:	-	m bTOC	Gatic or Stick Up?	Gatic
Sampler:	██████	Flow Cell Used?	No	Screened Interval From:	3	to 8 m bgl		
Date:	23/06/2025	WLevel Meter Type:	Interface Probe	Well Diameter:	50	mm	Stick Up:	- m
Round:	Post summer 2025	Field Filtered?	No					

[illegible]

Field QA Checks: Air bubbles in vials or violent reactions? No Decontamination as per GHD procedure? Yes Was sampling equipment pre-cleaned? Yes COC updated? Yes		Purge Volumes Casing Int. Dia (mm) 50 100 150 Vol (L/m of casing) 2.0 7.9 17.7			
--	--	---	--	--	--

Comment:				
Sample Summary	Samples collected?	Yes	Duplicate collected?	No
	#Primary sample containers	2	Duplicate analysis:	

Purging and Sampling Record

Well ID: 0960 MW134

Job Information		Sampling Information		Monitoring Well Information			
Client: Department of Defence		Purge Method:	No purge	SWL: 1.910	m bTOC	Time SWL Measured:	07:34 AM
Project: Defence PFASIM OMP Learning		Sample Method:	Hydrasleeve	Well Depth: 5.455	m bTOC	Logic Check:	Yes
Proj. No.: 12641234		Sample Depth:	5 m bTOC	NAPL Check: Absent		Well Cap Secure?	Yes
Site: 0960		WQuality Meter Type:	YSI pro quatro	NAPL Depth: -	m bTOC	Gatic or Stick Up?	Stick Up
Sampler: ████████		Flow Cell Used?	Yes	Screened Interval From: 1	to 5.7 m bgl		
Date: 25/06/2025		WLevel Meter Type:	Interface Probe	Well Diameter: 50	mm	Stick Up:	0.6 m
Round: Post summer 2025		Field Filtered?	No				

[illegible]

Field QA Checks: Air bubbles in vials or violent reactions? No Decontamination as per GHD procedure? Yes Was sampling equipment pre-cleaned? Yes COC updated? Yes						Purge Volumes Casing Int. Dia (mm) 50 100 150 Vol (L/m of casing) 2.0 7.9 17.7			
--	--	--	--	--	--	---	--	--	--

Comment:					
Sample Summary	Samples collected?	Yes	Duplicate collected?	No	Duplicate 1 ID:
	#Primary sample containers	2	Duplicate analysis:		Duplicate 2 ID:

Purging and Sampling Record

Well ID: 0960 MW137B

Job Information		Sampling Information		Monitoring Well Information						
Client: Department of Defence		Purge Method:	Low flow	SWL:	1.265	m bTOC	Time SWL Measured:	03:50 PM		
Project: Defence PFASIM OMP Learnm		Sample Method:	Peri pump	Well Depth:	3.370	m bTOC	Logic Check:			
Proj. No.: 12641234		Sample Depth:	2.2	m bTOC	NAPL Check:	Absent	Well Cap Secure?	Yes		
Site: 0960		WQuality Meter Type:	YSI pro quatro		NAPL Depth:	-	m bTOC	Gatic or Stick Up?	Stick Up	
Sampler: [REDACTED]		Flow Cell Used?	Yes		Screened Interval From:	2.5	to	3	m bgl	
Date: 24/06/2025		WLevel Meter Type:	Interface Probe		Well Diameter:	25	mm	Stick Up:	0.6	m
Round: Post summer 2025		Field Filtered?	No							

[illegible]

Field QA Checks: Air bubbles in vials or violent reactions? No Decontamination as per GHD procedure? Yes Was sampling equipment pre-cleaned? Yes COC updated? Yes		Purge Volumes Casing Int. Dia (mm) 50 100 150 Vol (L/m of casing) 2.0 7.9 17.7			
--	--	---	--	--	--

Comment: Unable to take SWL while purging due to width of PVC				
Sample Summary	Samples collected?	Yes	Duplicate collected?	No
	#Primary sample containers	2	Duplicate analysis:	
				Duplicate 1 ID:
				Duplicate 2 ID:

Purging and Sampling Record

Well ID: 0960 MW140A

Job Information		Sampling Information		Monitoring Well Information				
Client:	Department of Defence	Purge Method:	Low flow	SWL:	1.640	m bTOC	Time SWL Measured:	01:48 PM
Project:	Defence PFASIM OMP Learmondale	Sample Method:	Peri pump	Well Depth:	2.530	m bTOC	Logic Check:	Yes
Proj. No.:	12641234	Sample Depth:	2.1 m bTOC	NAPL Check:	Absent		Well Cap Secure?	Yes
Site:	0960	WQuality Meter Type:	YSI pro quatro	NAPL Depth:	-	m bTOC	Gatic or Stick Up?	Stick Up
Sampler:	██████████	Flow Cell Used?	Yes	Screened Interval From:	1.5	to 2 m bgl		
Date:	28/06/2025	WLevel Meter Type:	Interface Probe	Well Diameter:	25	mm	Stick Up:	0.6 m
Round:	Post summer 2025	Field Filtered?	No					

[illegible]

Field QA Checks: Air bubbles in vials or violent reactions? No Decontamination as per GHD procedure? Yes Was sampling equipment pre-cleaned? Yes COC updated? Yes		Purge Volumes Casing Int. Dia (mm) 50 100 150 Vol (L/m of casing) 2.0 7.9 17.7			
--	--	---	--	--	--

Comment: Unable to take SWL while purging due to width of PVC				
Sample Summary	Samples collected?	Yes	Duplicate collected?	No
	#Primary sample containers	2	Duplicate analysis:	

Purging and Sampling Record

Well ID: 0960 MW143A

Job Information		Sampling Information		Monitoring Well Information				
Client: Department of Defence		Purge Method:	Low flow	SWL:	2.482	m bTOC	Time SWL Measured:	03:40 PM
Project: Defence PFASIM OMP Learmon		Sample Method:	Peri pump	Well Depth:	3.825	m bTOC	Logic Check:	Yes
Proj. No.: 12641234		Sample Depth:	2.8	m bTOC	NAPL Check:	Absent	Well Cap Secure?	Yes
Site: 0960		WQuality Meter Type:	YSI pro quatro	NAPL Depth:	-	m bTOC	Gatic or Stick Up?	Stick Up
Sampler: ████████		Flow Cell Used?	Yes	Screened Interval From:	3	to 3.5	m bgl	
Date: 27/06/2025		WLevel Meter Type:	Interface Probe	Well Diameter:	25	mm	Stick Up:	0.6
Round: Post summer 2025		Field Filtered?	No					

[illegible]

Field QA Checks:		Purge Volumes			
Air bubbles in vials or violent reactions?	No				
Decontamination as per GHD procedure?	Yes	Casing Int. Dia (mm)	50	100	150
Was sampling equipment pre-cleaned?	Yes	Vol (L/m of casing)	2.0	7.9	17.7
COC updated?	Yes				

Comment:				
Sample Summary	Samples collected?	Yes	Duplicate collected?	No
	#Primary sample containers	2	Duplicate analysis:	

Purging and Sampling Record

Well ID: 0960 MW162

Job Information		Sampling Information		Monitoring Well Information				
Client:	Department of Defence	Purge Method:	No purge	SWL:	5.857	m bTOC	Time SWL Measured:	11:20 AM
Project:	Defence PFASIM OMP Learmondale	Sample Method:	Hydrasleeve	Well Depth:	8.754	m bTOC	Logic Check:	Yes
Proj. No.:	12641234	Sample Depth:	7.8 m bTOC	NAPL Check:	Absent		Well Cap Secure?	Yes
Site:	0960	WQuality Meter Type:	YSI pro quatro	NAPL Depth:	-	m bTOC	Gatic or Stick Up?	Gatic
Sampler:	██████	Flow Cell Used?	No	Screened Interval From:	17	to 20 m bgl		
Date:	23/06/2025	WLevel Meter Type:	Interface Probe	Well Diameter:	50	mm	Stick Up:	- m
Round:	Post summer 2025	Field Filtered?	No					

[illegible]

Field QA Checks:		Purge Volumes			
Air bubbles in vials or violent reactions?	No	Casing Int. Dia (mm)	50	100	150
Decontamination as per GHD procedure?	Yes	Vol (L/m of casing)	2.0	7.9	17.7
Was sampling equipment pre-cleaned?	Yes				
COC updated?	Yes				

Comment: Well potentially blocked to 8.754 m bTOC, as screen interval is fro 17 - 20 m according to ESDAT. May need to be unblocked prior to sampling in following round				
Sample Summary	Samples collected?	Yes	Duplicate collected?	No
	#Primary sample containers	2	Duplicate analysis:	

Purging and Sampling Record

Purging and Sampling Record

Purging and Sampling Record

Well ID: 0960 MW178C

Job Information		Sampling Information		Monitoring Well Information			
Client: Department of Defence		Purge Method:	Low flow	SWL:	1.745 m bTOC	Time SWL Measured:	11:09 AM
Project: Defence PFASIM OMP Learning		Sample Method:	Peri pump	Well Depth:	7.605 m bTOC	Logic Check:	Yes
Proj. No.: 12641234		Sample Depth:	6.5 m bTOC	NAPL Check:	Absent	Well Cap Secure?	Yes
Site: 0960		WQuality Meter Type:	YSI pro quatro	NAPL Depth:	- m bTOC	Gatic or Stick Up?	Stick Up
Sampler: ████████		Flow Cell Used?	Yes	Screened Interval From:	7 to 7.5 m bgl		
Date: 27/06/2025		WLevel Meter Type:	Interface Probe	Well Diameter:	25 mm	Stick Up:	0.6 m
Round: Post summer 2025		Field Filtered?	No				

[illegible]

Field QA Checks:		Purge Volumes			
Air bubbles in vials or violent reactions?	No				
Decontamination as per GHD procedure?	Yes	Casing Int. Dia (mm)	50	100	150
Was sampling equipment pre-cleaned?	Yes	Vol (L/m of casing)	2.0	7.9	17.7
COC updated?	Yes				

Comment: Unable to take SWL while purging due to width of PVC				
Sample Summary	Samples collected?	Yes	Duplicate collected?	No
	#Primary sample containers	2	Duplicate analysis:	

Purging and Sampling Record



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD108
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 2:18:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Dense vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, fine graded, loose, poorly graded, dry, dehydrated, concrete beneath

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD108_250625	1			No photo collection

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD113
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 10:18:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Gravelly SAND, orange brown, fine to coarse grained, loose, poorly graded

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD113_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD114
CLIENT:	Department of Defence	DATE:	24/06/2025 TIME: 8:11:00 AM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Sparse grass
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, red/brown, loose, poorly graded, fine grained, degydrated, dry, some rootlets, tractor tracks observed in line along with spray paint

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD114_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD121
CLIENT: Department of Defence DATE: 23/06/2025 TIME: 1:00:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Buffle grass sparse
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red/brown, loose, poorly graded, fine grained, dry, some rootlets.

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD121_250623	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD122
CLIENT:	Department of Defence	DATE:	23/06/2025
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Buffle grass dense
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, red/brown, loose, poorly graded, fine grained, dry, some rootlets

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD122_250623				

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD123
CLIENT:	Department of Defence	DATE:	23/06/2025 TIME: 1:13:00 PM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Buffle grass dense
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, red/brown, loose, poorly graded, fine grained, dry, some gravels

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD123_250623	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD124
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 9:37:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER
VEGETATION
SLOPE
EROSION

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD124	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD125
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 9:23:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD125_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD157
CLIENT:	Department of Defence	DATE:	25/06/2025 TIME: 2:31:00 PM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Sparse vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, red brown, fine grained, medium dense, poorly graded, slight moist, dehydrated

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD157_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD166
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 10:40:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, fine grained, loose, poorly graded, dehydrated

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD166_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD168
CLIENT:	Department of Defence	DATE:	25/06/2025 TIME: 10:59:00 AM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Sparse vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, red brown, fine grained, loose, poorly graded, slightly moist

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD168_250625	1	0960_QC104_250625	PFAS	
		0960_QC204_250625	PFAS	

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD170
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 2:46:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, fine grained, loose, poorly graded, dry, dehydrated

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD170_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD174
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 10:03:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained.

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD174_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD176
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 12:02:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD176_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD189
CLIENT:	Department of Defence	DATE:	25/06/2025 TIME: 8:15:00 AM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	No vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Drain, mud, unable to sample water as not enough
SEDIMENT (describe as soil)	Sandy CLAY, dark red brown, medium dense, wet, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD189_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD190
CLIENT:	Department of Defence	DATE:	26/06/2025 TIME: 3:45:00 PM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Sparse vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	SAND, dark orange brown, moist, fine to medium grained, loose, poorly graded, sediment film

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD190_250626	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD198
CLIENT: Department of Defence DATE: 24/06/2025 TIME: 3:05:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) SAND, pale red/brown, loose, poorly graded, fine grained, dry, shells present

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD198_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD199
CLIENT: Department of Defence DATE: 28/06/2025 TIME: 11:40:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain outlet/inlet

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Vegetation - under organic material / tree litter
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red/brown, medium dense, fine grained, poorly graded, dry, dehydrated

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD199_@50628	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD200
CLIENT: Department of Defence DATE: 28/06/2025 TIME: 11:50:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain inlet/outlet

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Vegetation and trees - under organic material / tree litter
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red/brown, medium dense, fine graded, poorly graded, dry, dehydrated

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD200_250628	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD210
CLIENT: Department of Defence DATE: 24/06/2025 TIME: 3:40:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen) Mud plain, unable to sample water as not enough
SEDIMENT
(describe as soil) CLAY, brown, loose, moist, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD210_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD219
CLIENT: Department of Defence DATE: 24/06/2025 TIME: 11:25:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy Clay, red/brown, loose, poorly graded, fine grained, dehydrated, slightly moist

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
060_SD219_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD231
CLIENT:	Department of Defence	DATE:	24/06/2025 TIME: 9:00:00 AM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Sparse grass
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, red/brown, loose, poorly graded, fine grained, dehydrated, dry, some rootlets

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD231_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD234
CLIENT: Department of Defence DATE: 24/06/2025 TIME: 8:27:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse grass
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red/brown, loose, poorly graded, fine grained, dehydrated, dry, some rootlets

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD234_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD235
CLIENT:	Department of Defence	DATE:	24/06/2025
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	No vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	CLAY, red/brown, dense, poorly graded, fine grained, dehydrated, slightly moist

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD235_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD243
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 10:13:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Suny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD243_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD265
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 2:23:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, fine grained, loose, poorly graded, moist

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD265_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD277
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 9:26:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD277_250625	1			Sample lost

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD278
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 9:15:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen) Drain, mud, unable to sample water as not enough
SEDIMENT
(describe as soil) Sandy CLAY, red brown, dry, dehydrated, organic material (plants), loose, poorly graded, fine grained

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD278_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD279
CLIENT: Department of Defence DATE: 25/06/2025 TIME: 11:08:00 AM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Drain

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red brown, fine grained, loose, poorly graded, dry, dehydrated

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD279_250625	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD288
CLIENT:	Department of Defence	DATE:	26/05/2025 TIME: 2:38:00 PM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Sparse vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	SAND, dark orange brown, moist, fine to medium grained, loose, poorly graded, sediment film

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD288_250626	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD291
CLIENT:	Department of Defence	DATE:	24/06/2025 TIME: 2:30:00 PM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Dense vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, dark red/brown, loose, poorly graded, fine grained, slightly moist, lots of organic material (roots)

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD291_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD292
CLIENT: Department of Defence DATE: 24/06/2025 TIME: 2:45:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Dense vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, dark red/brown, loose, poorly graded, fine grained, slightly moist, organic material (roots)

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD292_250624	1	0960_QC103_250624	PFAS	

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD293
CLIENT:	Department of Defence	DATE:	24/06/2025 TIME: 2:53:00 PM
SITE:	960	LOGGED BY:	

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	SEDIMENT:	Grab
-----------------------------------	----------------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Dense vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	
SEDIMENT (describe as soil)	Sandy CLAY, dark red/brown, loose, poorly graded, fine grained, slightly moist, lots of organic material (roots)

FIELD MEASUREMENTS

TEMPERATURE (°C)	
DO (mg/L)	
DO (%S)	
CONDUCTIVITY (µS/cm)	
pH (pH units)	
REDOX (mV)	
TURBIDITY (NTU)	

HYDROLOGICAL DATA

FLOW MEASUREMENT	
CROSS SECTION WIDTH (m)	
DEPTH (m)	
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD293_250624	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.: 12641234 SURFACE WATER ID:
PROJECT NAME: Defence PFASIM OMP Learmonth SEDIMENT ID: 0960_SD298
CLIENT: Department of Defence DATE: 28/06/2025 TIME: 12:45:00 PM
SITE: 960 LOGGED BY: 

COORDINATES/GPS (if applicable)
SAMPLING METHOD (ie grab, bucket) SURFACE WATER: SEDIMENT: Grab

DETAILED SAMPLE LOCATION DESCRIPTION Within creek bed

ENVIRONMENTAL OBSERVATIONS

WEATHER Sunny/windy
VEGETATION Sparse vegetation
SLOPE No
EROSION No

DESCRIPTIONS

SURFACE WATER
(colour, turbidity, odour, sheen)
SEDIMENT
(describe as soil) Sandy CLAY, red/brown, medium dense, fine grained, poorly graded, moist

FIELD MEASUREMENTS

TEMPERATURE (°C)
DO (mg/L)
DO (%S)
CONDUCTIVITY (µS/cm)
pH (pH units)
REDOX (mV)
TURBIDITY (NTU)

HYDROLOGICAL DATA

FLOW MEASUREMENT
CROSS SECTION WIDTH (m)
DEPTH (m)
OTHER

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD200_250628	1			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW001		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD301		
CLIENT:	Department of Defence	DATE:	29/06/2025	TIME:	3:30:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves/creek edge, large creek
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	Clayey SAND, orange/brown, saturated, fine to medium grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	22.9
DO (mg/L)	7.13
DO (%S)	104.00
CONDUCTIVITY (µS/cm)	58688.0
pH (pH units)	8.17
REDOX (mV)	9.0
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	very slow flow
CROSS SECTION WIDTH (m)	180
DEPTH (m)	0.5
OTHER	fish life, mangroves, mosquitoes

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD001_250629	1			
0960_SW301_250629	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW192		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD192		
CLIENT:	Department of Defence	DATE:	26/06/2025	TIME:	3:26:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mudplain, creek bed
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, moderate turbidity, no odour, no sheen, low sediment load, water running through sediment
SEDIMENT (describe as soil)	Silty SAND, brown/black, fine to medium grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	26.5
DO (mg/L)	3.54
DO (%S)	57.40
CONDUCTIVITY (µS/cm)	75195.0
pH (pH units)	7.59
REDOX (mV)	-57.1
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very low flow, recorded in mudplain
CROSS SECTION WIDTH (m)	1
DEPTH (m)	0.03
OTHER	puddle, mudplain water through sediment

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD192_250626	1			
0960_SW192_250626	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW193		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD193		
CLIENT:	Department of Defence	DATE:	26/06/2025	TIME:	3:16:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mudplain, creek bed
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Yellow/brown, moderate turbidity, no odour, no sheen, taken from crab hole, water running through sediment
SEDIMENT (describe as soil)	Silty SAND, brown/grey-black, fine to medium grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	19.8
DO (mg/L)	0.72
DO (%S)	10.30
CONDUCTIVITY (µS/cm)	64713.0
pH (pH units)	7.81
REDOX (mV)	-81.3
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very slow flow, recorded in mudplain
CROSS SECTION WIDTH (m)	0.05
DEPTH (m)	0.1
OTHER	crab hole

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD193_250626	1			
0960_SW193_250626	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW205		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD205		
CLIENT:	Department of Defence	DATE:	29/06/2025	TIME:	11:15:00 AM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves/creek edge, large creek
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	SAND, brown, saturated, fine to medium grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	21.7
DO (mg/L)	5.42
DO (%S)	79.10
CONDUCTIVITY (µS/cm)	63353.0
pH (pH units)	8.13
REDOX (mV)	36.4
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very slow flow
CROSS SECTION WIDTH (m)	230
DEPTH (m)	0.3
OTHER	fish life, mangroves, mosquitoes

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD205_250629	1			
0960_SW205_250629	2	0960_QC111_250629	PFAS	Surface water duplicate
		0960_QC211_260629	PFAS	

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW207		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD207		
CLIENT:	Department of Defence	DATE:	28/06/2025	TIME:	10:43:00 AM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, moderate turbidity, mod sediment load, no odour, no sheen
SEDIMENT (describe as soil)	Silty SAND, brown/ grey, saturated, fine grained, loose, poorly graded

FIELD MEASUREMENTS

TEMPERATURE (°C)	22.2
DO (mg/L)	6.32
DO (%S)	95.90
CONDUCTIVITY (µS/cm)	68339.0
pH (pH units)	7.77
REDOX (mV)	36.4
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very slow flow
CROSS SECTION WIDTH (m)	0.5
DEPTH (m)	0.05
OTHER	fish life, mangroves, shells

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD207_250628	1			
0960_SW207_250628	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW208		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD208		
CLIENT:	Department of Defence	DATE:	30/06/2025	TIME:	11:30:00 AM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Creek inlet, adjacent mangroves
SLOPE	30 degrees
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale green, low turbidity, no sediment, no odour, no sheen
SEDIMENT (describe as soil)	SAND, yellow-brown, saturated, medium to coarse, loose, poorly graded, seashells

FIELD MEASUREMENTS

TEMPERATURE (°C)	19.4
DO (mg/L)	6.93
DO (%S)	91.20
CONDUCTIVITY (µS/cm)	49231.0
pH (pH units)	8.19
REDOX (mV)	19.7
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Moderate flow
CROSS SECTION WIDTH (m)	30
DEPTH (m)	unknown
OTHER	fish life, mangroves

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD208_250630	1	0960_QC113_250630	SUT PFAS	
0960_SW208_250630	2	0960_QC114_250630	SUT PFAS	

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW209		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD209		
CLIENT:	Department of Defence	DATE:	27/06/2025	TIME:	2:15:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves'

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Rooted vegetation
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	SAND, brown, saturated, fine-medium grained, loose, poorly graded, grey sediment layer

FIELD MEASUREMENTS

TEMPERATURE (°C)	23.3
DO (mg/L)	5.14
DO (%S)	79.90
CONDUCTIVITY (µS/cm)	71260.0
pH (pH units)	7.91
REDOX (mV)	4.3
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Medium
CROSS SECTION WIDTH (m)	15
DEPTH (m)	Unknown
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD209_250627	1			
0960_SW209_250627	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):	large amount of mosquitoes
---	----------------------------



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW211		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD211		
CLIENT:	Department of Defence	DATE:	27/06/2025	TIME:	1:45:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / 4WD track

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Rooted vegetables
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Very pale yellow-brown, low turbidity, low sediment load, no odour, no sheen, sediment/silt on top
SEDIMENT (describe as soil)	Sandy CLAY, dark red brown, saturated, fine grained, medium dense, poorly graded, black sediment layer

FIELD MEASUREMENTS

TEMPERATURE (°C)	26.0
DO (mg/L)	3.70
DO (%S)	60.30
CONDUCTIVITY (µS/cm)	72228.0
pH (pH units)	8.00
REDOX (mV)	5.9
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Medium
CROSS SECTION WIDTH (m)	10
DEPTH (m)	Unknown
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD211_250627	1			
0960_SW211_250627	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW300		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD300		
CLIENT:	Department of Defence	DATE:	29/06/2025	TIME:	2:50:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves / creek edge
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	Clayey SAND, orange/brown, saturated, fine grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	21.5
DO (mg/L)	5.50
DO (%S)	79.30
CONDUCTIVITY (µS/cm)	61160.0
pH (pH units)	8.06
REDOX (mV)	22.5
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very slow flow
CROSS SECTION WIDTH (m)	140
DEPTH (m)	0.03
OTHER	fish life, mangroves, mosquitoes

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD300_250629	1			
0960_SW300_250629	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW301		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD009		
CLIENT:	Department of Defence	DATE:	28/06/2025	TIME:	1:17:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves/creek edge, large creek
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	SAND, red/brown, saturated, fine to medium grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	24.2
DO (mg/L)	5.46
DO (%S)	84.00
CONDUCTIVITY (µS/cm)	65259.0
pH (pH units)	7.85
REDOX (mV)	54.0
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	High flow
CROSS SECTION WIDTH (m)	200
DEPTH (m)	0.3
OTHER	fish life, mangroves, shells

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD009_250628	1			
0960_SW301_260628	2			SUT PFAS

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW302		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD302		
CLIENT:	Department of Defence	DATE:	25/06/2025	TIME:	4:46:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creekline

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Creek, pale yellow/green, no odour, no sheen
SEDIMENT (describe as soil)	SAND, brown, fine grained, loose, poorly graded, saturated

FIELD MEASUREMENTS

TEMPERATURE (°C)	23.5
DO (mg/L)	5.33
DO (%S)	82.90
CONDUCTIVITY (µS/cm)	71289.0
pH (pH units)	7.95
REDOX (mV)	4.6
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Medium
CROSS SECTION WIDTH (m)	10
DEPTH (m)	Unknown
OTHER	

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD302_250625	1			
0960_SW302_250625	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):	large amounts of mosquitoes
---	-----------------------------



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW303		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD303		
CLIENT:	Department of Defence	DATE:	29/06/2025	TIME:	5:11:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny / Windy
VEGETATION	Mangroves/creek edge
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	Clayey SAND, dark brown, saturated, fine to medium grained, loose, poorly graded

FIELD MEASUREMENTS

TEMPERATURE (°C)	19.5
DO (mg/L)	5.64
DO (%S)	74.70
CONDUCTIVITY (µS/cm)	51643.0
pH (pH units)	8.07
REDOX (mV)	30.2
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very slow flow
CROSS SECTION WIDTH (m)	180
DEPTH (m)	0.3
OTHER	fish life, mangroves, mosquitoes

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD303_250629	1			
0960_SW303_250629	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW304		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD304		
CLIENT:	Department of Defence	DATE:	29/06/2025	TIME:	5:24:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves/creek edge
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	Clayey SAND, dark brown, saturated, fine to medium grained, loose, poorly graded

FIELD MEASUREMENTS

TEMPERATURE (°C)	20.6
DO (mg/L)	6.59
DO (%S)	87.30
CONDUCTIVITY (µS/cm)	53022.0
pH (pH units)	8.12
REDOX (mV)	33.4
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Very slow flow
CROSS SECTION WIDTH (m)	
DEPTH (m)	0.3
OTHER	fish life, mangroves, mosquitoes.

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD304_250629	1			
0960_SW304_250629	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):



SURFACE WATER AND SEDIMENT SAMPLING RECORD

PROJECT NO.:	12641234	SURFACE WATER ID:	0960_SW305		
PROJECT NAME:	Defence PFASIM OMP Learmonth	SEDIMENT ID:	0960_SD305		
CLIENT:	Department of Defence	DATE:	27/06/2025	TIME:	2:53:00 PM
SITE:	960	LOGGED BY:			

COORDINATES/GPS (if applicable)

SAMPLING METHOD (ie grab, bucket)	SURFACE WATER:	Grab	SEDIMENT:	Grab
-----------------------------------	----------------	------	-----------	------

DETAILED SAMPLE LOCATION DESCRIPTION Creek boundary / adjacent mangroves

ENVIRONMENTAL OBSERVATIONS

WEATHER	Sunny/windy
VEGETATION	Mangroves
SLOPE	No
EROSION	No

DESCRIPTIONS

SURFACE WATER (colour, turbidity, odour, sheen)	Pale yellow, low turbidity, low sediment load, no odour, no sheen
SEDIMENT (describe as soil)	SAND, brown, saturated, fine-medium grained, loose, poorly graded, grey sediment layer

FIELD MEASUREMENTS

TEMPERATURE (°C)	21.2
DO (mg/L)	6.16
DO (%S)	87.20
CONDUCTIVITY (µS/cm)	57597.0
pH (pH units)	8.05
REDOX (mV)	-2.8
TURBIDITY (NTU)	-

HYDROLOGICAL DATA

FLOW MEASUREMENT	Moderate flow
CROSS SECTION WIDTH (m)	5
DEPTH (m)	0.15
OTHER	fish life, mangroves, shells

SAMPLE INFORMATION

SAMPLE ID (one primary sample per row)	NO. CONTAINERS	DUPLICATE ID (if applicable)	DUPLICATE ANALYSIS (if applicable)	COMMENT
0960_SD305_250627	1			
0960_SW305_250627	2			

OTHER COMMENTS FOR CONSIDERATION

(e.g. health and safety, access issues, change in location, general observation, notes for future):

QC Duplicate Sample Register Form – 0960 RAAF Learmonth

Date	Full Primary Sample ID	Blind Duplicate Sample ID (QC1XX)	Split Duplicate Sample ID (QC2XX)	Containers	Initials
23/6/25	0960-MW018-250623	0960-QC101-250623	0960-QC201-250623	PFAS	
24/6/25	0960-MW104-250624	0960-QC102-250624	0960-QC202-250624	"	
24/6/25	0960-SD292-250624	0960-QC103-250624	0960-QC203-250624	"	
25/6/25	0960-SD168-250625	0960-QC104-250625	0960-QC204-250625	"	
25/6/25	0960-MW126-250625	0960-QC105-250625	0960-QC205-250625	"	
26/6/25	0960-MW174-250626	0960-QC106-250626	0960-QC206-250626	"	
26/6/25	0960-SD193-250626	0960-QC107-250626	0960-QC207-250626	"	
27/6/25	0960-MW147A-250627	0960-QC108-250627	0960-QC208-250627	"	
28/6/25	0960-SD199-250628	0960-QC109-250628	0960-QC209-250628	"	
29/6/25	0960-MW141C-250629	0960-QC110-250629	0960-QC210-250629	SUT PFAS	
29/6/25	0960-SW205-250629	0960-QC111-250629	0960-QC211-250629	PFAS	
30/6/25	0960-MW159-250630	0960-QC112-250630	0960-QC212-250630	"	
30/6/25	0960-SD208-250630	0960-QC113-250630	0960-QC213-250630	SUT PFAS	
30/6/25	0960-SW208-250630	0960-QC114-250630	0960-QC214-250630	"	

QC Duplicate Sample Register Form – 0960 RAAF Learmonth

Date	Full Primary Sample ID	Blind Duplicate Sample ID (QC1XX)	Split Duplicate Sample ID (QC2XX)	Containers	Initials
30/6/25	0960-OTH103-250630	0960-QC115-250630	0960-QC215-250630	SUT PFAS	
30/6/25	0960-MW175A-250630	0960-QC116-250630	0960-QC215-250630	PFAS	

pg 1 of 2

QA blank sample register

Date/time	QA blank sample ID	Type (please circle)	Notes	Containers
			Rinsate taken off, field blank location, trip blank lab ID	
23/6/25	0960-QC301- 250623	(RB) FB TB	taken off Dipper	PFA5
23/6/25	0960-QC401- 250623	RB (FB) TB	taken near MW148S	"
24/6/25	0960-QC302- 250624	(RB) FB TB	taken off - Spade	"
"	0960-QC402- 250624	RB (FB) TB	taken near MW137	"
25/6/25	0960-QC303- 250625	(RB) FB TB	taken off dipper	"
"	0960-QC403- 250625	RB (FB) TB	taken near MW239A	"
26/6/25	0960-QC304- 250625	(RB) FB TB	taken off - Spade	"
"	0960-QC404- 250526	RB (FB) TB	taken near MW135	"
27/6/25	0960-QC305- 250627	(RB) FB TB	taken off dipper	"
27/6/25	0960-QC405- 250627	RB (FB) TB	taken near MW143	"
28/6/25	0960-QC306- 250628	(RB) FB TB	taken off - Spade	"
"	0960-QC406- 250628	RB (FB) TB	taken near MW179.	"
29/6/25	0960-QC307- 250629	(RB) FB TB	taken off dipper	"
"	0960-QC407- 250629	RB (FB) TB	taken near MW141	"
30/6/25	0960-QC308- 250630	(RB) FB TB	taken off shovel	"

QA blank sample register

Date/time	QA blank sample ID	Type (please circle)	Notes Rinsate taken off, field blank location, trip blank lab ID	Containers
30/6/25	0960-QC408- 250630	RB (FB) TB	Locker near OTH132	PFA5
		RB FB (TB)		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		
		RB FB TB		



ghd.com

→ **The Power of Commitment**

Appendix K

PFAS Analytical Suite

Group/Analytes	Water Std level (µg/L)	Water Std level (µg/L)	Water Low Level (µg/L)	Water Low Level (µg/L)	Super Trace (µg/L)	Super Trace (µg/L)	Super Ultra Trace (µg/L)	Super Ultra Trace (µg/L)
Method Code	EP231	EP231X	EP231-LL	EP231X-LL	EP231-ST	EP231X-ST	EP231-SUT	EP231X-SUT
Sample Volume Requirement	2x 20 mL	2x 20 mL	2x 20 mL	2x 20 mL	2x 120 mL	2x 120 mL	2x 120 mL	2x 120 mL
Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)		0.02		0.01		0.002		0.002
Perfluorobutane sulfonic acid (PFBS)	0.02	0.02	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Perfluoropentane sulfonic acid (PFPeS)		0.02		0.002		0.0005		0.0005
Perfluorohexane sulfonic acid (PFHxS)	0.01	0.01	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Perfluoroheptane sulfonic acid (PFHpS)		0.02		0.002		0.0005		0.0005
Perfluorooctane sulfonic acid (PFOS)	0.01	0.01	0.002	0.002	0.0003	0.0003	0.0002	0.0002
Perfluorononane sulfonic acid (PFNS)		0.02		0.002		0.0005		0.0005
Perfluorododecane sulfonic acid (PFDoDS)*		0.25		0.25		NA		0.005
Perfluorodecane sulfonic acid (PFDS)		0.02		0.002		0.0005		0.0005
Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	0.1	0.1	0.01	0.01	0.002	0.002	0.002	0.002
Perfluoropentanoic acid (PFPeA)	0.02	0.02	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Perfluorohexanoic acid (PFHxA)	0.02	0.02	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Perfluoroheptanoic acid (PFHpA)	0.02	0.02	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Perfluorooctanoic acid (PFOA)	0.01	0.01	0.002	0.002	0.0005	0.0005	0.0005	0.0005
Perfluorononanoic acid (PFNA)		0.02		0.002		0.0005		0.0005
Perfluorodecanoic acid (PFDA)		0.02		0.002		0.0005		0.0005
Perfluoroundecanoic acid (PFUnDA)		0.02		0.002		0.0005		0.0005
Perfluorododecanoic acid (PFDoDA)		0.02		0.002		0.0005		0.0005
Perfluorotridecanoic acid (PFTrDA)		0.02		0.002		0.0005		0.0005
Perfluorotetradecanoic acid (PFTeDA)		0.05		0.005		0.0005		0.0005
Perfluorohexadecanoic acid (PFHxDA)		0.05		0.005		NA		NA
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)		0.02		0.002		0.0005		0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)		0.05		0.005		0.001		0.001
N-Ethyl perfluorooctane sulfonamide (EtFOSA)		0.05		0.005		0.001		0.001
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)		0.05		0.005		0.001		0.001
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		0.05		0.005		0.001		0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)		0.02		0.002		0.0005		0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)		0.02		0.002		0.0005		0.0005
(n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	0.05	0.05	0.005	0.005	0.001	0.001	0.001	0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.05	0.05	0.005	0.005	0.001	0.001	0.001	0.001
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.05	0.05	0.005	0.005	0.001	0.001	0.001	0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	0.05	0.05	0.005	0.005	0.001	0.001	0.001	0.001
PFAS Sums								
Sum of PFAS		0.01		0.002		0.0003		0.0002
Sum of PFHxS and PFOS	0.01	0.01	0.002	0.002	0.0003	0.0003	0.0002	0.0002
Sum of PFAS (WA DER List)	0.01	0.01	0.002	0.002	0.0003	0.0003	0.0002	0.0002

*PFDoDS only available upon request, performed by ALS Sydney



ghd.com

→ **The Power of Commitment**